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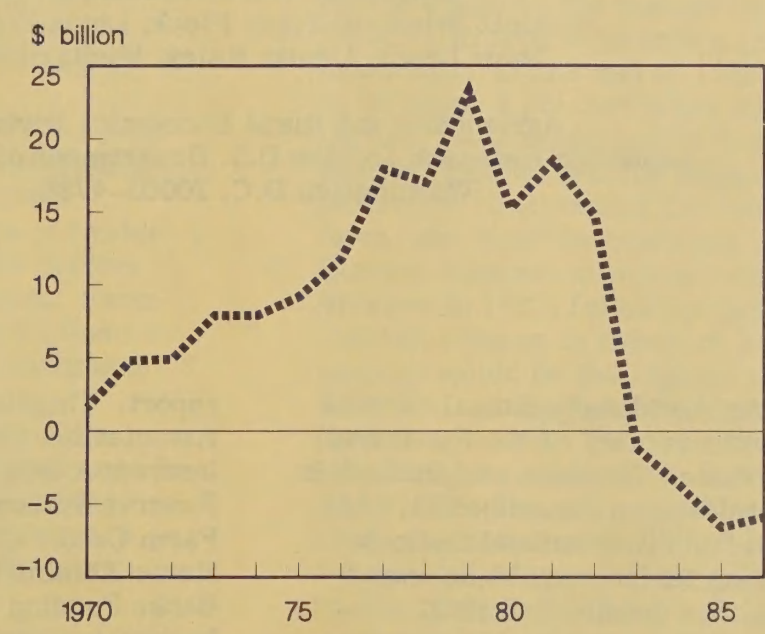
AFO-27
March 1987

Agricultural Finance

Situation and Outlook Report

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Annual Change in Farm Debt



Total farm debt declines for
fourth consecutive year.

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Approved by the World Agricultural Outlook Board. The next summary of the *Rural and Agricultural Finance Situation and Outlook* is scheduled for release on December 21, 1987. Summaries and full Situation and Outlook reports, including tables, may be accessed electronically. For details, call (202) 447-5163.

Many agencies and organizations supply data and other information contained in this

report. They include the American Bankers Association, American Council of Life Insurance, Board of Governors of the Federal Reserve System, Farm Credit Administration, Farm Credit Corporation of America, Farmers Home Administration, Federal Farm Credit Banks Funding Corporation, Federal Deposit Insurance Corporation, Federal Reserve Banks, National Agricultural Statistics Service, and life insurance companies.

SUMMARY

General economic conditions proved somewhat favorable to the agricultural sector in 1986. Input prices, led by an abrupt drop in oil prices, fell or increased only slightly. Interest rates continued to fall, although much more slowly in the last quarter.

Farm income generally stabilized in 1986, and prospects point to moderate growth in 1987. Total returns to farm assets are likely to be positive for the first time since 1980. However, the financial position of the farm sector, as indicated by the debt-asset ratio, declined further in 1986 and may continue to decline through at least the first half of 1987. The most severe financial stress for farm operators, as measured by debt repayment, may have occurred during 1985-86. Income maintenance in the late 1980's will likely depend on high per-acre yields, lower production and finance costs, and strong Government supports.

During the 2-year period 1985-86, production costs, excluding interest, declined about \$5 billion, led by lower prices for energy based inputs, such as fuel and fertilizer. Interest expense also fell about \$5 billion as both interest rates and outstanding debt declined. In addition, Government direct payments to agriculture doubled to \$12-13 billion.

The farm sector's financial difficulties passed increasingly to lenders in 1986. Problems varied somewhat by type of lender and location, with the Farm Credit System generally the most severely affected. Farm real estate values are forecast to decline \$25-40 billion in 1987, indicating continued large erosion in farm loan collateral. Declining farm asset values decrease the equity cushion that farmers historically use in difficult times. In some areas, declining equity has been compounded by inadequate cash flow resulting from natural disasters, such as drought.

Farm lenders will experience continued problems in 1987. Lenders will be competing for a somewhat smaller loan volume as the farm sector continues to pay down its debt. Fund availability will be ample for farmers with low to moderate debt levels (about 80

percent of all commercial farms). But further balance sheet restructuring of many financially stressed farmers will maintain pressure on repayment rates for some lenders in the months ahead. Nonperforming loans, delinquencies, defaults, write-offs, and acquired property will be problems facing many farm lenders.

The Tax Reform Act of 1986 could have a major impact on farm financial conditions and farm structure. The major feature of the new law is a sharp cut in tax rates for individuals, with the top tax rate falling from 50 to 28 percent by 1988. Many farmers will pay lower income taxes under the new law, but many incentives for farm investments are being reduced. As a result, tax shelter investments in agriculture should decline.

Highlights of the agricultural finance outlook are:

- o Net farm income may rise 7-9 percent in 1987, after adjustment for inflation. Net cash income of \$40 billion (in constant 1982 dollars to adjust for inflation) in 1987 would be the highest since 1979. Projected current dollar net cash income of \$48 billion would be the highest on record.
- o Total farm debt outstanding (excluding households) at the end of 1986 is expected to be about 3 percent lower than a year earlier. This would be the fourth straight year of decline, and the longest downturn on record. Excluding CCC loans, 1986 farm debt could be 6 percent below 1985.
- o Current income returns are expected to improve in 1987, following gains in 1986. Current returns to assets of 3.5-3.9 percent would be the highest since 1972-74, and the total return to assets (including current income and capital gains) may be positive for the first time since 1980. However, as of January 1, 1986, about 4 of every 10 farm operators in a large USDA survey were estimated to be unable to meet their debt obligations.
- o Commercial banks specializing in farm finance suffered increasing loan delinquencies and losses in 1986 as the quality of loan portfolios continued to deteriorate. Rates of return on both equity and assets fell as a result. However, the rate of farm loan

deterioration may be moderating. Agricultural banks accounted for just under one-half of the 103 commercial banks that closed due to insolvency during the first three quarters of 1986. The share of closures that was agricultural, however, may have peaked in 1985. This reflects accelerating problems at nonfarm banks, rather than improved agricultural bank conditions.

- o Farm Credit System (FCS) loan loss reserves are inadequate to deal with potential loan losses. On September 30, 1986, the FCS reported \$12.7 billion in high risk loans and \$5.6 billion in loss reserves and surplus. Unless financial conditions in

the agricultural sector stabilize, the FCS may require additional relief from Congress in 1987. Even if conditions improve, the effects of the last 2 years of losses will burden the FCS.

- o Some 32 percent of the Farmers Home Administration (FmHA) farm loans and 23 percent of the principal outstanding were delinquent on September 30, 1986. FmHA undertook three important policy actions in the farm loan area in 1986. These were a shift in emphasis from direct to guaranteed lending, the formalization of new procedures for handling delinquent loans, and the interest rate buydown program.

GENERAL ECONOMIC CONDITIONS

The U. S. economy continued the 1985 pattern of uneven growth in 1986, both across sectors and over time. Although the economy grew more slowly than in any other year in the current expansion, the recovery from the November 1982 trough did continue. By the end of 1986, the expansion had lasted 49 months, 14 months longer than the average peacetime expansion in the post-WW II era. Most economists expect continued growth through 1987, which, if realized, would make the expansion the longest peacetime rebound since before the Civil War. Even though activity in 1986 was not very brisk, events set the stage for stronger and more even growth in 1987 than in either of the previous years.

The Year in Review

In many ways, the performance of the economy in 1986 was a replay of 1985. Real growth in the production of goods and services (real GNP, figure 1) was just a shade lower than the 2.7-percent rate for 1985, but the overall rate masked the continuing divergent growth between goods-producing industries and service-producing industries. Industrial production, a measure of the performance of goods-producing industries, grew a paltry 0.5 percent in 1986 compared with 2 percent in 1985 and 11 percent in 1984. While measures

of the output of service-producing industries are not available, employment growth can be used to infer the growth in production. Employment in service-producing industries grew slightly faster than 3 percent, compared with no employment gain in the goods-producing industries. Since the middle of 1983, the economy has provided about 8 million new jobs, only 0.6 million of which have come in goods-producing industries. Between 1975 and 1985, the share of jobs in goods-producing industries declined from about 30 percent to 25 percent (figure 2).

Figure 1
Real GNP Growth

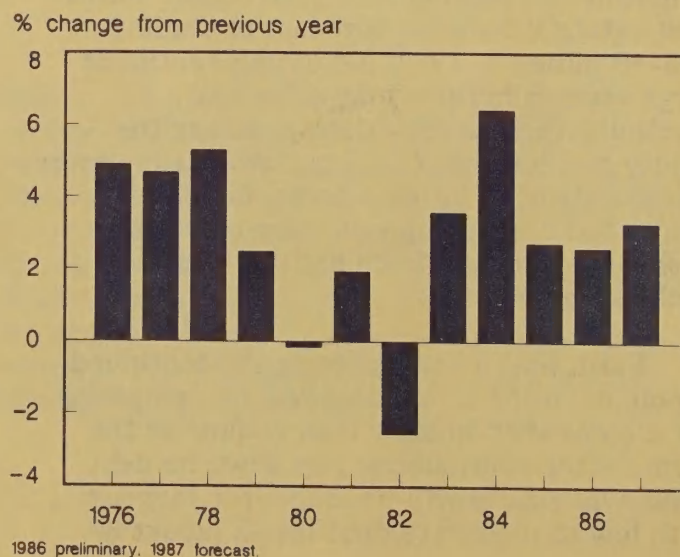
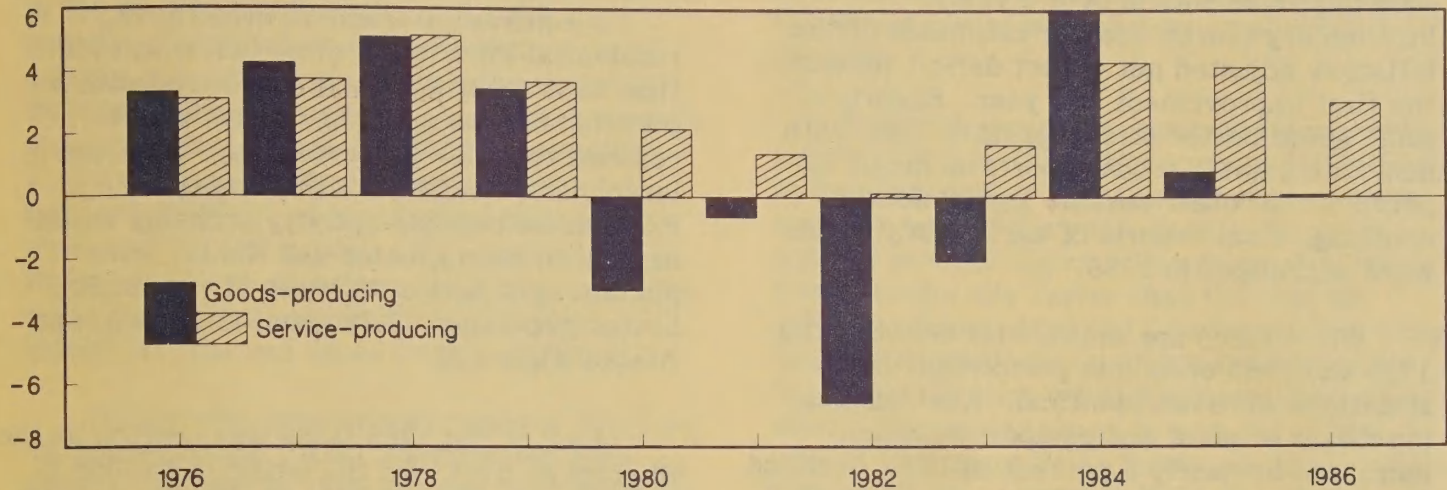


Figure 2

Employment Growth Rates

% change from previous year



1986 preliminary.

Whatever increase in goods demand there was in 1986 was met mostly by imports. Real (inflation-adjusted) imports grew about 4 percent in 1985 and another 10 percent in 1986, while exports fell 2 percent in 1985 and grew only about 1.5 percent in 1986. As a result, the net export deficit widened during 1986, averaging nearly \$40 billion (in 1982 dollars) more than the \$108 billion level for 1985 (figure 3). A striking feature of the overall deficit was the negative agricultural trade balance from May through July, the first agricultural trade deficits since 1971. The worsening net export deficit occurred despite a continued fall in the value of the dollar,

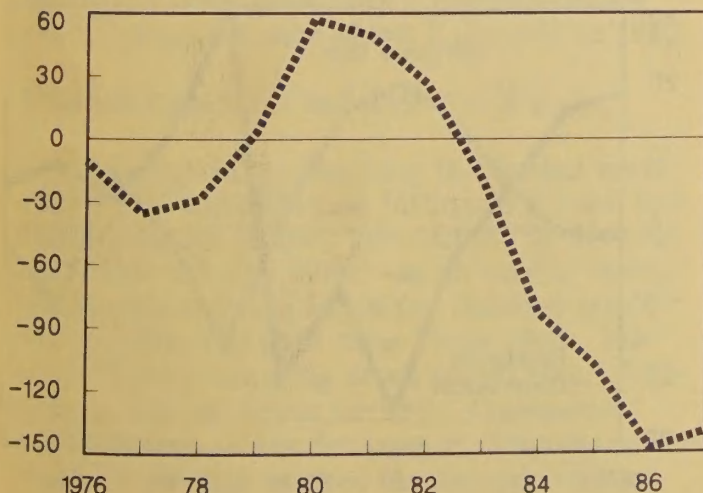
which began in March 1985. From March to December 1985, the Federal Reserve trade-weighted exchange rate index declined nearly 25 percent (figure 4). During 1986 it declined another 15 percent.

On the strength of the dollar's decline, many analysts predicted that the tide of imported goods would recede while exports would increase. Unfortunately, a substantial turnaround failed to materialize. What little improvement there was during the year was too late and too little to help domestic production much. There were, however, some indications that the import tide was turning.

Figure 3

Real Net Exports

1982 \$ billion

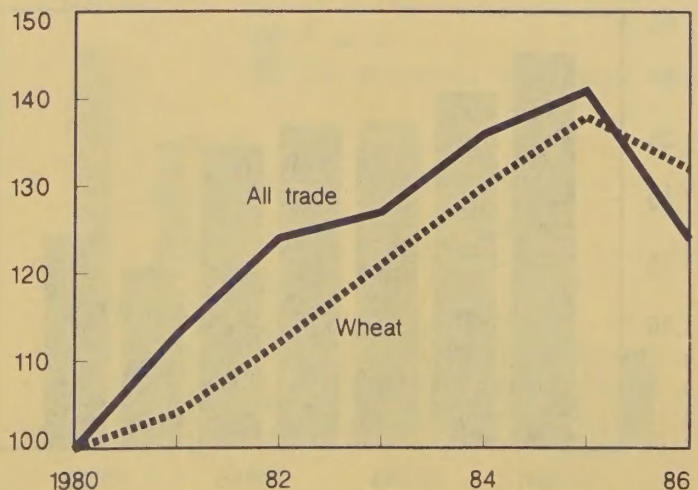


1986 preliminary, 1987 forecast.

Figure 4

Exchange Rates

% of 1980



1986 preliminary.

At the end of the year, the merchandise trade balance posted consecutive increases in August, September, and October, the first such improvements in over 2 years.

Preliminary fourth-quarter estimates of the inflation-adjusted net export deficit showed the first improvement in a year. Exports of some goods posted strong gains in 1986, with non-auto capital goods exports up about 10 percent and "other durable goods" nearly doubling. Real exports of agricultural goods were unchanged in 1986.

While there are similarities between the 1985 and 1986 economic performances, the situations were not identical. Real business purchases of plant and equipment, which increased by nearly 5 percent in 1985, declined for the first time since 1983, reducing overall domestic demand. The major factor causing the decline was the precipitous drop in crude oil prices which occurred late in 1985 and continued through the first half of 1986. Using the price of West Texas Intermediate crude as an indicator, oil prices declined from about \$24 per barrel in December 1985 to around \$11 per barrel by April 1986 (figure 5). The drop in oil prices caused the petroleum industry, which accounted for about 10 percent of all plant and equipment spending in 1985, to cut back its plant and equipment spending by 25 to 30 percent. Production in the oil and gas extraction industry fell 15 percent over the first 9 months of the year. Industries supplying inputs to the petroleum industry were hit with declines in demand,

resulting in layoffs and the cancellation of scheduled plant and equipment purchases, further reducing investment spending.

In contrast to business investment, residential investment grew faster in 1986 than 1985: over 9 percent compared with 5 percent. Falling mortgage rates, which reached their lowest levels since 1977, were largely responsible for the increase. Residential building activity probably would have been even greater had the oil price plummet not hurt activity in oil-producing States like Texas, Oklahoma, Louisiana, and Alaska (figure 6).

Much of the 1986 story was written by the oil price decline. On the whole, a decline in the price of a strategic input, like oil, should have beneficial effects on the economy, since commodities that require the good as an input can be made more cheaply. One industry, however, is certain to be hurt: the industry that produces the strategic good. In the short run, the negative impacts on the producing industry, and industries closely linked with it, can outweigh the positive impacts, since it takes some time for producers and consumers to adjust their spending patterns to take the fullest advantage of the price decline. Exactly when the positive effects begin to outweigh the negative effects is largely determined by factors such as the size of the industry in the economy and the extent to which the good is imported.

Figure 5

Domestic Crude Oil Prices

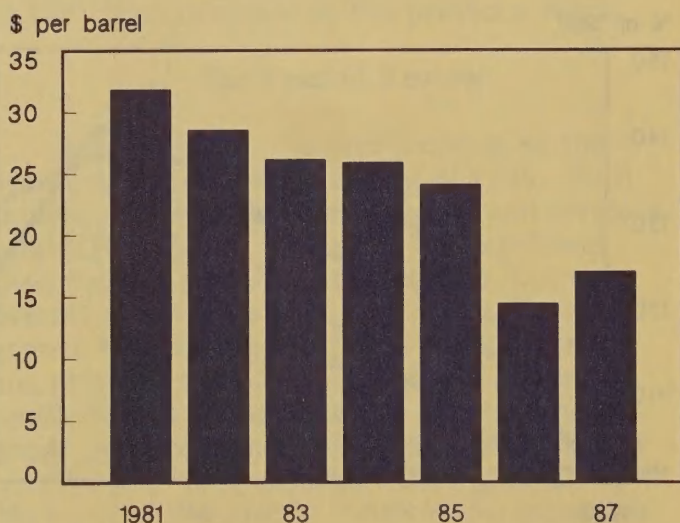
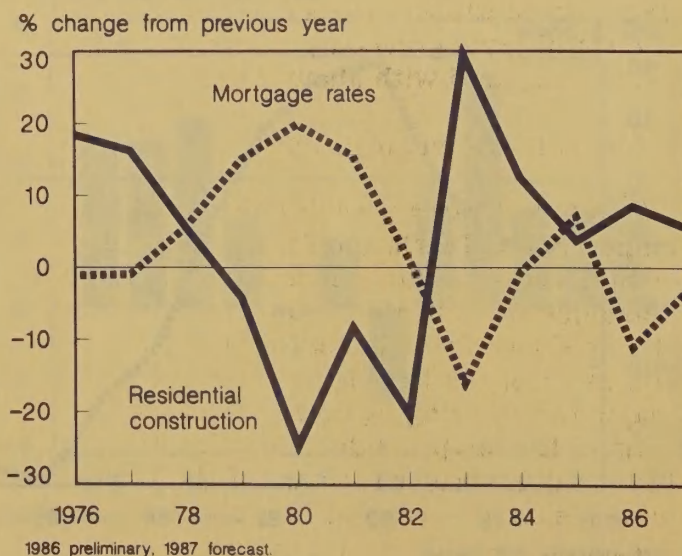


Figure 6

Residential Construction and Mortgage Rates



The abrupt decline in oil prices initially had a strong negative impact on the U.S. economy, since the United States has a sizable petroleum industry. Consumers and producers in the oil-producing States cut back their spending for other goods and services more quickly than the rest of the economy could increase their purchases of goods that became less expensive. Thus, for 1986, some of the slow growth in goods production is the temporary effect of the decline in industries that produce and exploit oil resources. However, lower oil prices have helped set the stage for an increase in demand in the industries that use oil as a major input.

Nationally, consumers benefited from the oil-price decline. Real consumption grew about 4 percent in 1986 and has been brisk throughout the recovery. In the early part of the recovery, consumption growth matched income growth, but in 1985 and 1986 it exceeded income growth. Real disposable income grew about 3.5 percent in 1986, following a 2.4-percent increase in 1985, and about 4.5 percent in 1983 and 1984. Throughout 1986, consumption was financed by drawing down savings and piling up debt. The savings rate out of personal income reached an alltime low of 2.9 percent in the third quarter of 1986, while the debt-to-income ratio exceeded 19 percent. The previous peak for the ratio was just over 16 percent in 1979.

Not all consumer goods fared equally well. Durable good purchases grew strongly during the year, thanks to cut-rate financing deals offered by auto manufacturers. Consumption of services grew 3.5 percent, continuing the strong rates of 1983 through 1985. In contrast, real purchases of food at the retail level grew only 1 percent on the year, compared with about 2 percent in 1985.

Interest Rates and Inflation Decline

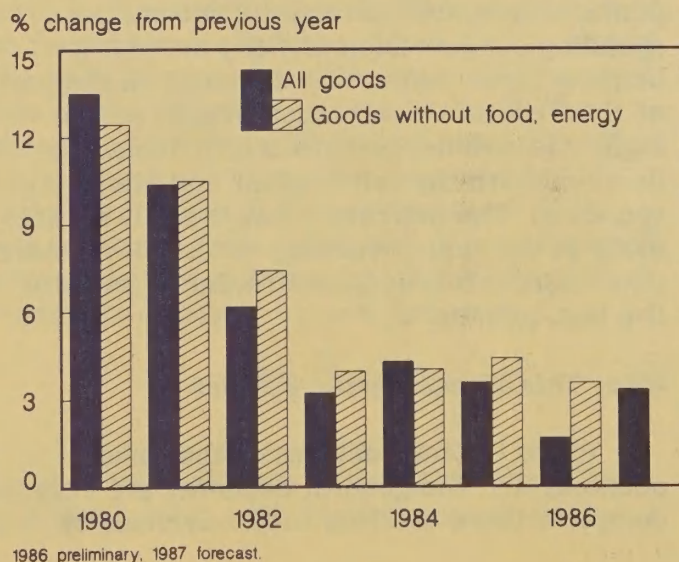
Interest rates reaching the lowest level since 1977 and inflation falling to a level not seen in recent history accounted for the best economic news in 1986. On an annual basis, the Producer Price Index for finished goods fell in 1986, the first time since 1966. The major factor bringing down prices was, of course, the oil-price decline. Consumers faced falling prices for part of the year as the oil price decline worked its way through to consumer goods. The 1.1-percent Consumer

Price Index increase was the lowest since 1961. Falling energy prices were not the only reason the price level fell during 1986. At the producer level, for example, iron-ore prices fell about 5 percent and cement about 2 percent.

Rates of growth for nonenergy consumer prices varied in 1986. Food prices fell slightly in the first half of the year but rose strongly over the rest of the year, ending the year about 4 percent higher. The price of services rose considerably faster than the overall consumer index, at about 5 percent. Excluding food and energy prices, which are generally more volatile than other consumer prices and which account for about 30 percent of the overall Consumer Price Index, consumer prices rose about 3.5 percent in 1986 (figure 7).

The underlying rate of inflation has been slowing over the course of the whole recovery, although the slowdown has been more marked in the second phase. Unit labor costs are generally considered a measure of the underlying rate of inflation, since labor costs typically account for two-thirds to three-quarters of the cost of producing goods. Unit labor costs rose a little more than 2 percent during 1986 and the average rate of collective bargaining wage increases in the first contract year was also about 2 percent. Wage inflation in this range suggests that the underlying rate of inflation will continue to moderate in 1987, although the overall inflation rate should rise as the effect of the oil-price collapse dissipates.

Figure 7
Consumer Price Indexes



Lower inflation rates, coupled with an aggressively accommodating monetary policy which reduced the discount rate four times during the year, brought interest rates tumbling down. The 3-month Treasury bill rate began the year at about 7 percent but fell almost continuously through September, then remained relatively constant, at about 5.4 percent. Longer term rates followed the same pattern, with AAA bond rates falling 1.5 percentage points through September but staying relatively constant in the last quarter. The bank prime rate started the year at 9.5 percent and generally followed short-term Treasury rates down. The interest rate decline can be attributed to three related factors.

First, in late December 1985, Congress passed the Gramm-Rudman-Hollings (GRH) legislation, which mandated targets for the Federal deficit for each fiscal year from 1986 through 1991. The bill sent a message to financial markets that Federal credit demands would be falling provided that the provisions of the new law were met. Longer rates fell more sharply early in the year than did short rates, flattening the yield curve, and indicating that investors expected short rates to be falling in the future. Lower future short term rates are associated with the two other major factors: declines in expected inflation and expected increases in credit supplies by monetary accommodation.

Early in the year, declines in the inflation rate and an optimistic Federal budget outlook helped reduce interest rates. As the year progressed, the budget outlook became cloudier, and when the Supreme Court declared unconstitutional the automatic spending cut provision of GRH in July, it became clear that credit demands on the part of the Federal Government would remain high. Meanwhile, private credit demands declined with the fall in plant and equipment spending. The net result was the fall in rates early in the year (with long rates falling more than short rates) and a stiffening of rates in the last quarter.

What This Means for the Farmer

While the interactions of the farm economy and the general economy are very complex, there are four major avenues by

which events in the general economy are transmitted to the farm economy. First, the level of general demand affects the level of demand for farm products, both as an input into the production of other goods and by consumers for food. In general, economists have estimated that a 1-percent increase in per capita disposable income is consistent with about a 0.3-percent increase in per capita food expenditures at the retail level (when the price of food relative to all other prices is held constant). For the general level of activity to have an appreciable impact on food demand, say, for per capita food demand to rise by 1 percent, disposable per capita income would have to rise by about 3.3 percent. While such rates of increase were observed in the first phase of the recovery, per capita disposable income grew only 2.4 percent in 1986. Thus the level of general economic activity did not increase the demand for farm products very much in 1986.

A second avenue by which conditions in the general economy affect farmers is through the exchange rate and real economic growth abroad. All other things held constant, an increase in the rate of economic growth abroad should increase the foreign demand for U.S. farm products much like an increase in domestic income growth affects the demand for farm products. Likewise, the value of the dollar with respect to other currencies affects foreign demand for U.S. farm products. If the exchange value of the dollar is high, foreigners must part with more of their own currency to buy U.S. farm products (or any U.S. products). Since consumers typically buy less of a product when it costs more, the demand for farm products is lower when the exchange value of the dollar is high.

Though the theoretical directions of effects are easy to explain it is hard to obtain precise estimates of the effects of foreign growth and the exchange value on the demand for agricultural products. If the effect of the foreign demand increase is about the same size or smaller than the domestic income effect, it is unlikely that rising income abroad affected the demand for U.S. farm products substantially in 1986, since the rest of the world grew just slightly more slowly than the United States.

Because the value of the dollar declined substantially during 1985 and 1986, many

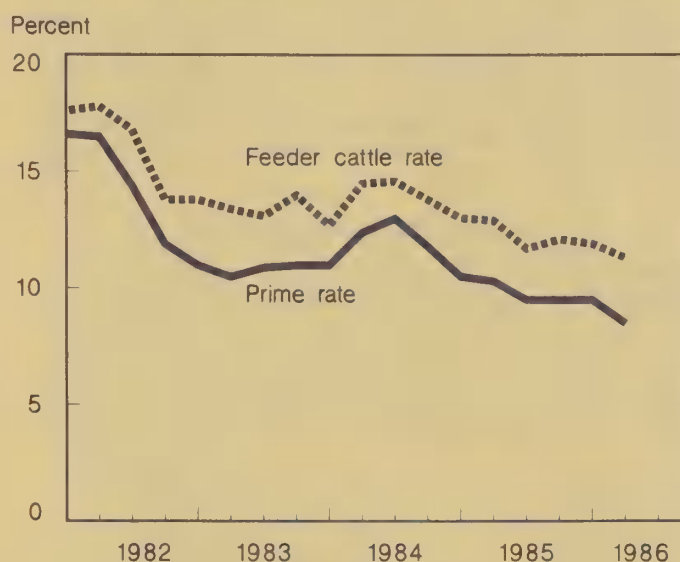
forecasters predicted an increase in the foreign demand for U.S. farm products. However, large worldwide surpluses of agricultural commodities tended to offset the exchange rate effect, as agricultural commodities from all suppliers became cheaper. Another factor which tended to mute the expected effect of falling exchange rates on the demand for U.S. agricultural commodities was the unevenness of the decline in the value of the dollar. While the dollar declined with respect to major industrialized countries with which the United States does about 60 to 70 percent of its foreign trade, it did not decline against those countries which are major competitors in the agricultural commodities markets. Figure 4 shows the relationship of the value of the dollar measured using a standard developed by the Federal Reserve and a measure which compares the dollar against those countries which are major agricultural trading partners for wheat. Even though the value of the dollar has declined for both indexes, the decline is far greater for the Federal Reserve index, which is more meaningful to overall trade, than for the wheat-weighted index.

The decline in the value of the dollar was uneven across countries as well as commodities. The dollar barely declined against the Taiwan and South Korean currencies. These countries accounted for about 10 percent of agricultural exports in 1985. Thus, the dollar's decline did little to stimulate world demand for U.S. agricultural production.

The two remaining major avenues through which the general economy affects the farm economy work through the cost side of the farm income statement. Increases in the general price level have a profound effect on the cost of inputs used by the farm sector. Of all farm production expenses, manufactured goods accounted for slightly more than 15 percent in 1985. A good indicator of the rate of overall input price increase faced by the farmer from outside the farm sector is the Producer Price Index, especially for intermediate goods. The intermediate goods index fell about 4 percent in 1986, compared with no change in 1985. Farmers realized a considerable cost savings through this avenue in 1986. Cash expenses are projected as having declined about \$6 billion in 1986, to

Figure 8

Prime Rate and Loan Rates for Feeder Cattle



\$106 billion, the lowest level since 1979. The primary area of savings was, of course, in energy expenses, but the energy price decline allowed fertilizer and other input prices to fall slightly, so the indirect effects of the crude oil price decline worked in the favor of the farmer also.

Besides helping to keep the overall level of demand high in the economy, the interest rate decline also affected the interest expense component of farm production costs. In 1985 interest payments accounted for about 14 percent of total production costs. Declines in the general level of interest rates are not mirrored precisely in declines in the rates charged to farm borrowers, however. While farm interest rates follow the general trend of interest rates, figure 8 shows that the average bank prime rate has been lower from 1982 through the middle of 1986 than rates charged on feeder livestock loans, although the size of the difference varies over time. The varying size of the difference could be due to the changing perception of the riskiness of lending to farm borrowers relative to nonfarm borrowers. Even if the general level of interest rates falls, rates facing farmers could either rise or not fall as quickly if the risk of lending to a farm borrower has risen.

The Outlook

The economic outlook for 1987 is for faster and more even growth than in 1985 and 1986. Real GNP should grow more than 3

percent, with a higher rate of growth in real disposable income as higher wage manufacturing jobs are added in greater numbers. Although the underlying rate of inflation is relatively low, it is likely to be higher than the overall price level increases in 1986, so that the inflation rate is likely to be about 3 to 4 percent.

Interest rates should rise slightly throughout 1987 in response to faster real growth and slightly higher rates of inflation. It is unlikely with real growth in excess of 3 percent that the Federal Reserve Board will try to force interest rates down during 1987. Whether rates facing agricultural borrowers rise with the general level of rates is largely a question of whether the risk premium for agricultural loans increases or decreases. In the face of modest interest rate increases and no change in agricultural conditions, interest rates facing farmers are not likely to increase significantly. The exchange rate should stabilize near its value at the end of 1986 or drop slightly, but the lagged effects of the earlier exchange value decline should continue to affect trade volumes throughout 1987.

This general outlook for 1987 is contingent on many factors, which if changed considerably, will change the outlook. First, recent events have unsettled crude oil markets again, and the price outlook is cloudy. A significant increase in the price of crude oil could substantially raise the U.S. inflation rate, leading to higher interest rates, and lower rates of investment and consumption activity.

Although the foreign trade picture seems to be improving, should the improvement turn out to be temporary, or should the improvement not be quick enough, there is a possibility that protectionist measures could be adopted to control imports. This could bring some short-run improvement in national economic performance, but U.S. trading partners are likely to retaliate, which would hurt exports, production, and employment growth. One example of retaliation affecting agriculture is Canada's recent decision to apply a countervailing duty on U.S. corn exports.

It is possible that conditions in agriculture may indirectly affect other sectors of the

economy by causing a change in the overall tax and spending policies of the Federal Government. If Federal payments to the agricultural sector considerably exceed budgeted levels, a higher-than-expected Federal deficit will result. This could bring pressure on the President and Congress to alter their overall, as opposed to agricultural, policies in order to keep the deficit at or near the Gramm-Rudman-Hollings targets. The shape and scope of policy changes to meet this contingency are highly uncertain, but the short run effects of additional fiscal tightening are likely to be contractionary. Furthermore, for sectors highly dependent on Government payments, including agriculture, the effects of such reductions are likely to be severe.

Finally, 1987 is the first year of phase-in for many of the provisions of the tax reform bill passed in 1986. Since the bill legislates lower rates for consumers and somewhat higher effective rates on business income, it is hard to predict the net effect of consumer and producer reactions. The elimination of the investment tax credit, retroactive to January 1986, tends to hurt business investment, but the expected increase in demand for consumer products as a result of higher after-tax consumer income should tend to increase investment by those industries producing consumer goods. The net effect on real activity in 1987 will be small relative to the effects which will be felt in 1988 and 1989, as more of the bill's provisions take effect.

OVERVIEW OF THE FARM ECONOMY

The farm sector economic difficulties in the 1980's were at least partially the consequence of investment and finance trends engendered by the prosperity of the 1970's. Due to a declining U.S. dollar and high growth in foreign demand for food grains, feed grains, and soybeans, real net farm income (1982 dollars) was about \$35 billion or more during 6 of the 8 years, 1972-79, a level not reached since. Real net cash income was nearly 30 percent higher in 1970-74 compared to 1960-64, and the real asset level increased nearly 70 percent in 1975-79 compared to 1960-64 (tables 1, 2). In comparison to the slow, steady farm business growth during the 1960's, 1970's income levels and growth in asset values were notably strong.

Table 1.--Farm sector income, 1960-86

Year	Current income			Deflated income (\$1982) 1/		
	Net	Net	Off	Net	Net	Off
	cash	farm	farm	cash	farm	farm
Billion dollars						
1960-64	13.5	11.5	10.0	42.5	36.1	31.5
1965-69	16.2	13.2	14.6	44.4	36.2	40.2
1970-74	26.0	22.1	22.2	54.3	46.0	46.9
1975-79	30.8	23.6	28.0	45.4	34.9	41.2
1980-84	36.0	22.3	36.4	36.7	22.6	37.0
1985	44.0	30.5	40.8	39.5	27.3	36.6
1986P	44.2	28.8	42.7	38.6	25.1	37.3

P = preliminary. 1/ Deflated by the Gross National Product implicit price deflator, 1982=100.

Prolonged economic growth, such as occurred in 1972-79 in agriculture, fosters behavior that eventually undermines the growth process. In response to higher income, lower real interest rates (after inflation) and to an important degree, income tax incentives to invest, farmers and others during 1972-79 bid land prices up 235 percent, increased annual machinery and equipment purchases 192 percent, and raised farm debt 181 percent. The prosperity of 1972-79 led to a weakening of the sector's ability to provide a low cost, competitive product in the 1980's.

Aggregate Developments in the 80's

While both land prices and farm debt increased in 1980-81, there were several

indications that prosperity was waning. In 1980, current returns to farm equity became negative for the first time since the 1930's, farm machinery expenditures declined, nominal interest rates rose through the 20-percent level, a serious drought occurred in parts of the country, and total production expense increased \$10 billion. Agriculture entered the 1980's with an inflated cost structure, a burdensome debt load pushing rapidly toward \$200 billion, increased production capacity, and critically dependent on sustained export demand. In this increasingly vulnerable financial position, producer and lender expectations of sustained demand and rising commodity prices went unfulfilled.

The years 1982-84 were financially devastating for many producers. Export demand fell broadly. The domestic economy experienced high inflation, soaring real interest rates, and a deep recession in 1981-82. A severe drought occurred in the Midwest in 1983 and a series of localized droughts continued in parts of the South. A downward price spiral was relieved only by the supply-reducing 1983 drought and the payment-in-kind (PIK) program. The debt burden of many small and large farms became untenable.

Federal assistance increased to cushion farm financial problems. The burden of large program outlays and the view that U.S. farm

Table 2.--Balance sheet of the farming sector, 1960-86 1/

Year	Current dollar						Deflated (\$1982) 2/			
	Assets			Liabilities			Total	Total	Equity	
	Real estate	Nonreal estate & financial	Total	Real estate	Nonreal estate	Total	assets	liabilities		
Billion dollars										
1960-64	134.5	55.7	190.2	13.7	15.0	28.7	596.5	89.9		506.6
1965-69	178.0	68.2	246.3	22.6	20.7	43.3	675.4	118.6		556.8
1970-74	256.7	100.5	357.2	32.9	29.1	62.0	749.9	130.5		619.4
1975-79	529.4	162.4	691.8	59.5	57.3	116.8	1005.0	169.7		835.3
1980-84	736.1	223.7	959.8	98.6	94.2	192.8	986.3	196.4		789.9
1985	559.6	211.8	771.4	97.3	94.8	192.1	690.6	172.0		518.6
1986P	509.2	197.5	706.7	92.0	94.2	186.2	616.7	162.5		454.2

P = preliminary. 1/ Excluding operator households. 2/ Deflated by the Gross National Product implicit price deflator, 1982=100.

products were increasingly priced higher than competitors', led to the passage of 1985 farm legislation designed to provide a more consistent "market orientation." Continuing sluggish trade conditions, record 1985 farm production levels, record or near-record 1986 soybean and corn yields, and lower CCC loan rates further depressed commodity prices. In current dollars, 1986 farm prices of corn, wheat, and soybeans were typically about 20 to 30 percent below the 1973-76 levels (table 3). When adjusted for the loss of purchasing power due to inflation, these prices in some cases were as much as 60 to 70 percent below the 1973-76 levels.

U.S. exports continue depressed. In spite of the declining trade-weighted value of the dollar during 1985, the value of 1985 U.S. exports was about one third below the 1981 level.

Farm Sector Outlook

Several factors are shaping the financial future of agriculture:

- o Key economic conditions are changing. These include reduced production cost structure, lower interest rates, a more competitive dollar and a projected stabilization of both agricultural export volume and value.
- o Real net cash income stabilized at relatively higher levels in 1985-86 and is

currently projected to increase about \$3 billion.

- o Current returns to farm assets and equity have reached 3 percent or more.
- o The rapid decline in real estate values has slowed, and there are indications that future declines, should they continue, will be some fraction of the annual average decline of \$85 billion in 1984-85.
- o The financial crisis increased during 1985-86 for "technically insolvent" farms, those whose debts exceeded their total assets. However, there is evidence that slippage of farms from "financially strong" to "stressed" has slowed. This may indicate that fewer commercial size farm operators will experience financial stress in 1987.
- o Unprecedented levels of Government outlays to support farm income are partially offsetting reduced open market receipts, and have cushioned the transition to a more competitive agricultural cost and price structure (figure 9).

Because of the strengthening of the above trends, there is reason to believe U.S. agriculture is on a firmer financial footing than in 1984-85. Although difficulties may increase in regions such as the Southeast and Southern Plains, due to the lingering effects of the 1986 drought. Also, record soybean, feed grain, and food grain ending stocks in 1986 and/or 1987 are a cause of deep concern because of their price-dampening impact.

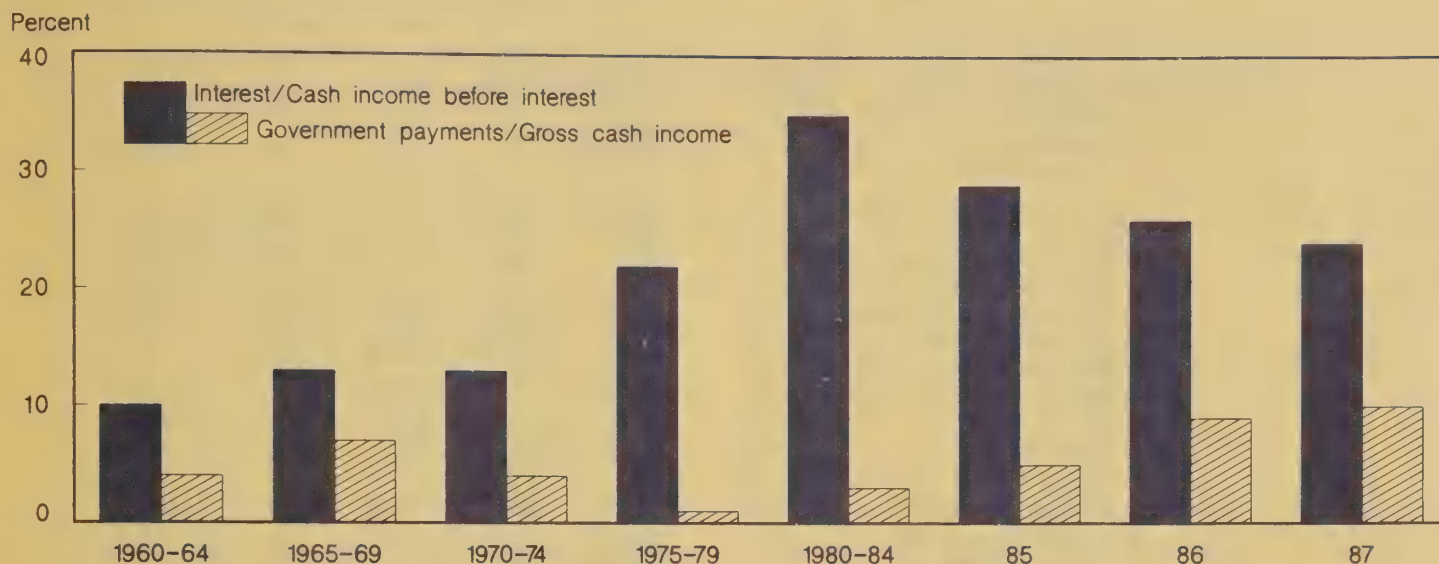
Table 3.--Current and constant dollar commodity prices, selected years, 1973-86

Prices/years	Corn : (bu.)	Wheat : (bu.)	Soybeans : (bu.)	Cotton : (lb.)	Cattle : (lb.)	Hogs (lb.)
Dollars per unit						
Current:						
Average price, 1973-76	2.57	3.55	6.01	0.51	0.36	0.41
Average price, 1983-86	2.56	3.11	6.00	.57	.55	.47
Estimated price, 1986 1/	1.93	2.37	4.95	.51	.54	.50
Constant: 2/						
Average price, 1973-76	4.61	6.47	10.72	.89	.65	.72
Average price, 1983-86	2.36	2.86	5.53	.53	.51	.43
Estimated price, 1986	1.70	2.09	4.37	.46	.48	.45
Ratio of average prices:						
1983-1986/1973-76						
Current	1.00	.88	1.00	1.12	1.53	1.15
Constant	.51	.44	.52	.60	.78	.60
1986/1973-76						
Current	.75	.67	.82	1.00	1.50	1.22
Constant	.37	.32	.41	.52	.73	.63

1/ 1986 prices are not official USDA estimates. 2/ Deflated by the Gross National Product implicit price deflator.

Figure 9

Trends in Interest and Direct Government Payments



The current more optimistic prospect for recovery is fragile because Government outlays to agriculture may not be viewed by farmers or farm lenders to be "permanent," and crop prices are very weak. Given the weakened balance sheet position of the farm sector, it is likely that at least 2 more years of major operator debt reduction will occur, accompanied by large Federal outlays, before agriculture attains a more solidly competitive, financially stable position.

FARM INCOME

Net farm income, in constant 1982 dollars, is expected to rebound about 8 percent to \$27 billion in 1987 from \$25 billion in 1986 (table 4). While improved over the levels of 5 of the 7 years, 1980-86, the 1987 net farm income estimate remains substantially lower than the strong \$35 billion "plus" levels achieved by this production-based income measure during 1972-79. Net cash income, which does not include depreciation, changes in commodity inventories or the farm household's income and expenses, is projected to reach \$40 billion (1982 dollars) the highest level since 1979, and achieve a record \$45- \$49 billion in current 1986 dollars.

The years 1985-87 constitute a surprisingly solid net cash income performance during a period when cash receipts fell 12 percent. Direct Government payments, up

\$7- \$8 billion, and cash expenses, down \$9 billion, have offset declining cash receipts from marketings since 1985. In addition to record yields and high production in several major crops, and declining prices in the mid-1980's, extraordinary increases in Government outlays have become critical to farm income maintenance.

Growing Government Payments

Direct Government payments to farmers (cash and certificates) will likely reach \$12- \$13 billion in 1986 and increase to \$15 or possibly \$16 billion in 1987. These levels would provide 9 and 10 percent respectively of 1986 and 1987 gross cash income. The anticipated doubling in the direct payments to gross cash income ratio from about 5 percent in 1984-85, is due primarily to large increases in cash deficiency payments, and enactment of the Dairy Termination Program and the Conservation Reserve. The current prospect for large land diversion payments, growth in conservation reserve rental outlays, and gains in program participation suggest that the Federal Government may continue to provide 8-12 percent of gross cash income through direct payments. Major components of direct payments include deficiency, diversion, storage, and conservation programs.

Direct payments provided a large share of agricultural revenues to major farm States in 1985 (in millions): Texas (\$848), Iowa (\$691),

Table 4.--Farm income and cash flow statement

Item	1983	1984	1985	1986P	1987F
	Billion dollars				
1. Farm receipts	140.9	146.4	148.5	137	130
Crops (incl net CCC loans)	67.0	69.2	72.7	61	58
Livestock	69.5	72.9	69.4	71	72
Farm related	4.4	4.3	6.4	5	5
2. Direct Government payments	9.3	8.4	7.7	13	15
Cash payments	4.1	4.0	7.6	9	9
Value of PIK commodities	5.2	4.5	0.1	4	6
3. Total gross farm income	152.4	174.4	166.6	160	150
4. Gross cash income	150.2	154.9	156.2	150	151
5. Nonmoney income	13.2	13.3	11.5	10	9
6. Value of inventory change	-10.9	6.3	-1.1	-3	-3
7. Cash expenses	113.0	115.6	112.1	106	103
8. Total expenses	139.5	141.7	136.1	129	125
9. Net cash income	37.1	39.3	44.0	44	48
10. Net farm income	13.0	32.7	30.5	28	32
Deflated (1982\$)	12.5	30.3	27.3	25	27
11. Off-farm income	37.0	37.9	40.8	43	44
12. Loan changes : Real estate	2.5	-0.8	-5.6	-5	-3
13. : Nonreal estate	1.0	-0.8	-9.2	-6	-3
14. Rental income plus monetary chng	5.7	7.8	8.0	7	7
15. Capital expenditures	13.0	12.5	10.1	8	7
16. Net cash flow	33.3	33.0	27.1	32	41

P=Preliminary. F=forecast.

Nebraska (\$518), Illinois (\$492), North Dakota (\$484), Kansas (\$482), Minnesota (\$480), Arkansas (\$329), California (\$302), Oklahoma (\$250). The 63 percent of direct payments received by these States was consistent with a trend in recent years for the top ten agricultural States to receive 60-70 percent of the total. While the size of the payments will likely double between 1985 and 1987, the relative distribution among these leading States is expected to remain similar to 1985.

The sheer size of Government direct payments makes them a core component of the outlook for farm income. Several enterprise budget analyses have suggested Government payments permit "cashflowing" the purchase of good quality farmland in the Midwest at current prices with modest downpayments. Investor concerns regarding the "permanence" of large direct payments during 1988-90 may be one reason that frequently positive cashflows were not translated in 1986 into land price stabilization.

Exports

During the last 5 marketing years the following percentage of production of these crops was exported: wheat (54), rice (49), cotton (47), soybeans (40), corn (26). These crops, produced primarily in the Corn Belt, Delta, Northern Plains, and Southern Plains, remain heavily dependent upon exports.

However, the export value of wheat, rice, feed grains, oilseeds and products, and cotton declined 25 percent in the first 11 months of the 1986 fiscal year (table 5). The value of agricultural exports fell 17 percent overall in this period, while export volume declined 15 percent.

With recent changes in exchange rates there are indications that U.S. agricultural exports in 1987 will begin to stabilize for commodities such as soybeans, wheat, and rice, while increasing in cotton. The longer-run export outlook is clouded because

Table 5.--U.S. agricultural exports: Quantity and value of selected commodities, October-August 1984/85 and 1985/86

Commodity group	Quantity			Value		
	October-August 1984/85	October-August 1985/86	Percentage change	October-August 1984/85	October-August 1985/86	Percentage change
	Thousand tons			Million dollars		
All animal products	2,148	2,404	12	3,751	3,987	6
Meats and meat products	393	403	3	830	913	10
Poultry meats	215	241	12	238	256	7
Dairy products	380	444	17	383	391	2
All grains and feeds	88,271	67,680	-23	12,539	8,723	-30
Wheat	26,557	22,822	-14	3,998	2,964	-26
Rice	1,743	1,948	12	603	565	-6
Feed grains	52,275	33,356	-36	6,500	3,533	-46
Oilseeds and products	22,443	26,244	17	5,866	5,955	2
Oilcake and meal	4,227	5,276	25	786	1,064	35
Soybeans	15,763	19,317	23	3,696	4,010	8
Sunflower seeds	990	356	-64	299	94	-69
Cotton, excluding linters	1,233	400	-68	1,881	600	-68
Cotton linters	38	33	-13	21	13	-36
Total, all commodities	118,388	101,214	-15	29,317	24,410	-17

Source: U.S. Department of Agriculture, Economic Research Service, Foreign Agricultural Trade of the United States, September/October 1986.

of the uneven changes in the U.S. dollar against currencies of both importers and exporters of grains, oilseeds, and cotton, and the 1-3 year lag between currency devaluation and resultant changes in trade patterns. Also affecting exports will be the continued presence of both tariff and nontariff barriers to major U.S. agricultural commodities, targeted Export Assistance Agreements, and supply/demand factors ranging from global weather patterns to changes in meat production levels in centrally planned economies.

Modest Fall in 1987 Cash Receipts

A solid performance by poultry and strong gains in cattle and hogs are projected to cushion the continuing decline in cash receipts for food grains, feed grains, and oil crops in 1987 (table 6). The expected 5-7 percent decline in crop receipts can be attributed to the very burdensome buildup in stocks during 1984-86, as exports declined, and to the impact of lower price supports mandated by the 1985 Food Security Act's market oriented design. Crop cash receipts depend upon CCC

price stabilization activity. Net increases in CCC loans will average about \$10 billion annually during 1985-87, while food grain, feed grain, and oil crop receipts will have fallen from more than \$42 billion to about \$29 billion between 1985 and 1987.

Gains in fed cattle prices of \$4 to \$6 per cwt in 1987 and potentially improved hog prices are anticipated to continue the broad-based 1986 recovery in red meats. However, potential consumer resistance to higher meat prices, as influenced by economic conditions, and continuing gains in poultry demand pose possible problems for red meat producers in 1987. Dairy producers will likely experience slightly lower cash receipts in 1987, although lower feed prices could improve profits.

Production Expense Decline Continues in 1987

A 2- to 4-percent decline in current dollar production expense in 1987 would constitute the third consecutive annual decline in this critical component of the farm income

statement (table 6). The 5-percent fall in 1986 is the largest in more than 30 years. Agricultural costs, which increased six-fold since the early 1950's, are undergoing a major restructuring led by substantial declines in petroleum based inputs, interest, and machinery and buildings capital consumption. In 1986, lower costs were about equally the result of lower input prices and reduced input quantities. Declining input prices and quantities are currently projected to continue into 1988. However, international input trade relationships and broad macroeconomic factors are important to production cost structure and are subject to rapid change.

The downward trend in grain prices will shift feed expense lower (4-7 percent), benefiting poultry, beef, and hog producers. The 20-percent acreage set-aside and 15-percent paid land diversion will have a large impact on fertilizer sales in 1987. Compared to a nearly \$16-billion expense bill for fertilizer and fuels in 1982, the 1987 projection is for \$10 billion.

Interest expense is forecast to decline \$3 billion between 1985-87, following a \$2-billion drop in 1982-84. The continuing fall in depreciation expense and mid-1980's declines in repair, miscellaneous operating expense, and rent also lower cost structure. Only three nonfarm origin input components are expected to increase in 1987: property taxes (2 percent), hired labor (2 percent) and electricity (3 percent).

Income Distribution

A shifting of net cash income from crop to livestock farms likely occurred in 1986. Crop farms accounted for nearly 61 percent of net cash income in 1985, about 53 percent in 1986, and may decline to 51 percent in 1987. The largest share of this decline is in the cash grain sector. Cash grain farms averaged an estimated \$17,400 in income in 1985, but their incomes in 1986 and 1987 could be \$3,000 lower, because Government payments and

lower input costs will not fully offset declining crop prices.

Fruit, vegetable, and horticultural farms, which together comprise 6 percent of farms and 14 percent of cash receipts, received 27 percent of total net cash income in 1985 and could get more in 1986 and 1987. These tend to be large-scale commercial operations selling high-value products with earnings substantially above those of the average crop farm. Vegetable farms realize the greatest per farm annual net cash income with well over \$100,000.

Livestock's projected income gains in 1987 are due to higher receipts and lower expenses. Net cash income of meat animal farmers, which totaled an estimated \$5.7 billion in 1985, or 33 percent of total livestock income, increased in 1986 due to stronger hog receipts and reduced expenses. In 1987, meat animal income may surpass poultry and dairy sector income as cash receipts improve for cattle and hogs and expenses continue to decline. Largely through their own grain production, meat animal farms may receive about \$2 billion in direct Federal payments in 1986 and 1987--more than half the livestock sector's total.

Dairy sector net cash income, which totaled an estimated \$6.2 billion in 1985, may improve in 1986 and 1987 despite possibly lower milk prices and cash receipts. The poultry and egg sector, which in 1985 accounted for 2 percent of all farms and 11 percent of all net cash income, may realize the largest income gain of all farm enterprises in 1986. A substantial increase in receipts will likely combine with lower expenses to raise income more than a fourth above the \$4.9 billion of 1985. Aside from vegetable farms, poultry and egg operations received the largest per farm income (\$102,400 in 1985). Despite little growth in 1987 receipts (except for turkeys), poultry income will probably be maintained near the 1986 level as production expenses again decline. The profitability of specialized farms of alternative sizes is examined in table 7.

Table 6.--Cash receipts and production expense

	Year			Change	
	1985	1986	1987	1986-87	Major factors
	Billion dollars		Percent		
1. Total cash receipts	142.1	132	130	-2	Small decline in 1987 following 6-8% fall in 1986 as excess grain stocks and lower CCC loan rates took effect. Rising livestock receipts in 1986-87 do not offset slide in crop receipts.
2. Crop cash receipts	72.7	61	58	-6	Crop receipts in 1987 lower due to \$3.5-billion decline in corn, wheat, and soybean sales.
Food grains	8.8	6	5	-9	After one-third fall in 1986, due to both lower prices and production, will fall again in 1987 as higher production does not offset lower CCC loan rates and market prices.
Feed grains	21.4	16	13	-17	Nearly 40% decline between 1985 and 1987, corn 41% lower. CCC loans provide 40% of 1986 feed crop receipts. Paid land diversion in 1987 to reduce second-half corn marketings. Trend may be for more grain to be fed directly on farms.
Oil crops	12.2	11	10	-4	Soybean yield second highest in 1986, while peanuts down 20% due to drought. Peanut rebound in 1987 will not offset lower soybean, sunflower, flaxseed prices.
Fruits, nuts, vegetables	-15.4	15	15	1	Commercial vegetable prices up 2% in 1986, 2-4% in 1987. Lower production of fruits and nuts resulted in 4-6% decline in receipts. Large citrus crop may lower early 1987 fruit prices.
Cotton, Horticultural Other	14.9	13	14	1	After 20-25% fall in 1986, cotton receipts may stabilize in 1987. Tobacco receipts may fall slightly and greenhouse and nursery receipts increase slightly in 1987.
3. Livestock cash receipts	69.4	71	72	2	Strong year shaping up in 1987 for hogs and cattle with \$2 billion higher sales projected.
Meat animal	38.2	39	40	5	Hog receipts rose 18% between 1985 and 1987. Cattle receipts up 5% to \$27-28 billion. Strong gains for livestock operations in States such as Iowa.
Poultry	11.2	13	13	-1	Strong demand and production increases for broiler and turkeys continued in 1986. Higher output offset by lower prices in stable 1987.
Dairy product	18.1	18	17	-3	Combination of slightly lower milk production and possible decline in support price in 1987.
Other livestock	1.9	2	2	2	
4. Production expense	136.1	129	125	-3	The 5%-decline in 1986 was largest since 1953. Third consecutive year of decline is expected in 1987 with lower manufactured inputs and feed expense.
Farm origin	31.7	31	31	-2	A nearly \$2-billion fall in feed expense between 1985 and 1987 was offset by \$900 million higher livestock expense.
Manufactured	20.9	18	17	-9	A \$4-billion decline between 1985 and 1987 was due to reduced acreages and lower prices of petroleum based inputs which reduced fertilizer, fuel, and pesticide expenses.
Interest	18.7	16	16	-3	A \$400-million decline in 1987 may be a conservative estimate following \$1.4 billion fall in 1986. Declines due to both lower debt and interest rates.
Other operating	31.7	32	31	-2	Slightly lower custom work, repair, and other operating expense is primarily due to reduced commodity program acreages.
Other overhead	32.9	31	30	-3	A 6-10% decline in rents and 3-5% lower inflation is likely in both 1986 and 1987. Lower depreciation is due to continuing depression in farm machinery sales.

Net Returns for Differing Sizes of Farm Operations, 1985

Before-tax business profitability, or net returns, varies by size classes for all types of specialized farms (table 7). ^{1/} The net returns concept excludes all farm household items, as well as depreciation expenses. Actual capital expenditures are accounted for as are the value of crops produced but not sold in 1985. Because the proportion of hired labor varies greatly by farm size, net returns are calculated both with and without an imputation for unpaid labor hours. ^{2/}

About three-quarters of the specialized wheat farms in \$100,000-\$249,999 size class had positive returns, despite the fact that world wheat prices are at their lowest level since the early 1970's. The asset value of the mid-size wheat farms is about two times that of the smaller farms. The greater productive capacity of the mid-size farms explains their greater net returns, although their rate

^{1/} Specialized farm types are defined as having production valued at \$40,000 or more and with at least half of the production in one or two commodities. Although farms whose total value of production is less than \$40,000 account for 72 percent of all farms they produce relatively little of U.S. production. For wheat they produce about 15 percent, corn-soybean about 13 percent of production, and about 5 percent of cotton and dairy production.

^{2/} When an imputation is made for unpaid labor it is conservatively valued at the average wage rate for paid farm laborers.

of return on assets is also somewhat larger. The survey data do not permit a statistically reliable analysis of the largest sized wheat farms.

The smaller corn-soybean producers had the highest returns of all the small specialized farms. Similarly, the medium and large size corn-soybean farms had the greatest returns for their size among the specialized farm types analyzed. The greater profitability of corn-soybean farms relative to other types of specialized farms is in part attributable to their lower average expenses per value of production and not to higher asset values in each size class. In fact, corn-soybean farms' average value of assets of \$448,000 was lower than the other three types of specialized farms.

The higher returns of mid-sized compared to large cotton farms was, in part, due to the \$50,000 government payment limitation which caused many large cotton farms not to participate in Government programs, in 1985. Non-participating cotton farms did not receive Government income supports when cotton prices subsequently fell due to a significant decline in cotton exports.

Because dairying is a labor-intensive speciality there is a large difference in the percent of farms with positive net returns before and after a charge for unpaid labor. The mid-sized dairy farms had the highest percent of farms with positive returns before inclusion of unpaid labor. When an imputation for unpaid labor is made, however, the largest dairy farms had the highest percent with positive net returns.

Table 7.--Net returns of specialized farms by value of production classes, 1985

Returns to enterprise before/after own labor charge	Value of total production					
	\$40,000- \$99,999		\$100,000- \$499,999		\$500,000 or more	
Average returns (percent positive returns)						
Wheat						
Before	\$12,870	(71.8)	\$39,027	(76.4)	NA	(NA)
After	-\$1,362	(52.4)	\$23,872	(73.1)	NA	(NA)
Corn-soybeans						
Before	\$18,021	(82.3)	\$52,032	(82.0)	\$150,687	(84.2)
After	\$6,766	(68.6)	\$36,425	(76.3)	\$133,707	(78.8)
Cotton						
Before	\$2,991	(63.2)	\$49,917	(79.5)	\$25,306	(56.3)
After	-\$11,014	(35.4)	\$32,961	(74.5)	\$11,442	(56.3)
Dairy						
Before	\$10,188	(79.7)	\$31,198	(83.4)	\$138,599	(77.1)
After	-\$12,235	(32.1)	\$8,197	(61.7)	\$122,115	(71.1)

NA = Not available.

Source: USDA Farm Costs and Return Survey, 1985

Table 8.--Balance sheet of the farm sector, December 31, 1981-87 1/

Item	1981	1982	1983	1984	1985	1986P	1987F	Change 1985-86	Change 1986-87
Billion dollars								Percent	
Assets:	1,005.2	977.8	956.8	856.0	771.4	707	669	-8.4	-5.3
Real estate	780.2	745.6	736.1	639.6	559.6	509	474	-9.0	-7.0
Nonreal estate:	192.6	197.3	183.8	178.4	177.0	162	161	-8.2	-0.7
Livestock and poultry	53.5	53.0	49.7	49.6	45.9	45	49	-2.4	8.7
Machinery and motor vehicles	103.0	103.7	100.9	95.0	92.2	89	86	-3.8	-3.0
Crops stored on and off farms	36.1	40.6	33.3	33.8	37.1	29	27	-22.1	-8.3
Financial assets:									
Demand deposits	5.6	5.8	6.1	6.2	6.7	7	7	3.0	2.9
Currency	1.9	2.0	2.0	2.1	2.3	2	2	4.3	4.2
Investments in co-ops	24.8	27.2	28.8	29.7	27.7	26	25	-7.2	-4.7
Liabilities:	188.8	203.6	202.4	198.7	192.1	186	174	-3.1	-6.3
Real estate debt	97.2	101.2	103.7	102.9	97.3	92	89	-5.4	-3.4
Nonreal estate debt	91.6	102.4	98.7	95.7	94.8	94	86	-0.6	-9.2
CCC	8.0	15.4	10.8	8.6	16.9	22	17	30.8	-25.3
Other	83.6	87.0	87.9	87.1	77.9	72	69	-7.4	-4.3
Proprietors' equity	816.4	774.2	754.4	657.3	579.3	520	494	-10.2	-5.0
Debt-to-asset ratio	18.8	20.8	21.2	23.2	24.9	26	26	5.8	-1.0

P = preliminary. F = forecast. 1/ Excluding operator households.

FARM SECTOR BALANCE SHEET

The financial position of the farm sector is illustrated with a balance sheet (table 8). The projected \$3- to \$4- billion improvement in net cash income in 1987 is not anticipated to be matched by a strengthening of the sector's financial position. A 5- to 7- percent decline in debt will likely be offset by a further erosion of farm real estate values. After increasing 1 percentage point in 1986, the debt to asset ratio is forecast to stabilize in 1987 at 26 percent. An arrest of the fall of land prices is critical to stabilize the balance sheet. Uncertainty regarding income levels, possible revisions in Government commodity programs, and the continuing financial difficulties of farmers and farm lenders, diminish prospects for land price stabilization in 1987.

Farm Assets

Total farm asset values were expected to be about \$700-\$715 billion on December 31, 1986, compared with \$771 billion a year earlier. As in the past 4 years, the decline in real estate values was the primary factor behind the drop. Real estate values, which fell nearly 13 percent in 1985, are expected to have fallen another 6-10 percent in 1986, and could decline by another 5-10 percent in 1987. This would leave real estate assets at about \$470-\$480 billion, a level near that for

1976-77. In real terms, real estate assets in 1987 would be at early 1960's levels (figure 10).

Nonreal estate assets are currently expected to have been about \$195-\$200 billion on December 31, 1986, a drop of about 6-8 percent from the \$212 billion of December 31, 1985. This decline was caused by reductions in the number and value of equipment and motor vehicles on farms and reductions in livestock and crop inventory values. For 1987, nonreal estate assets are projected to drop by about 1 percent. Crop and machinery inventory values are expected to continue to decline, reflecting reduced crop prices and higher machinery consumption than investment. Price improvements are responsible for increases in livestock inventories.

Farm Debt

Farm debt is projected to decline \$10-\$14 billion in 1987, a marked acceleration in the mid-1980's trend of \$5 to \$7 billion lower debt annually (table 9). This follows the peaking of farm real estate debt (excluding households) at slightly over \$100 billion during 1982-84, and total farm debt at about \$200 billion during 1982-83.

The \$270- billion decline in real estate values between 1981 and 1986 has undercut the loan collateral value of land, particularly in the Midwest and Plains States. Reflecting

Figure 10

Farm Sector Debt and Assets

\$ million

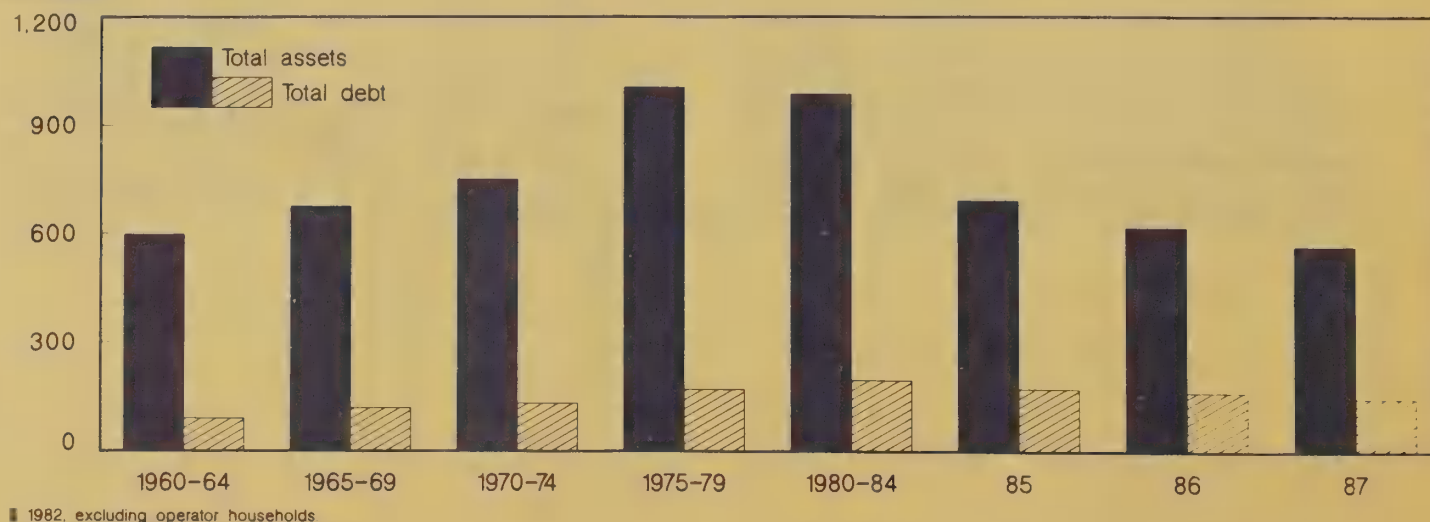


Table 9.--Total farm debt, December 31, 1980-86 1/

Year	:	:	Excluding CCC loans		:	Including CCC loans		
	: Real	:	Nonreal	Total	:	CCC loans	Nonreal	Total
	: estate	:	estate debt	debt	:		estate debt	debt
	: debt	:			:			
Million dollars								
1980	87,781		77,448	165,229	:	4,978	82,426	170,207
1981	97,218		83,604	180,822	:	8,011	91,615	188,833
1982	101,192		86,973	188,165	:	15,433	102,406	203,598
1983	103,726		87,923	191,649	:	10,801	98,764	202,450
1984	102,926		87,115	190,041	:	8,635	95,750	198,676
1985	97,300		77,870	175,170	:	16,928	94,798	192,098
1986P	92,000		72,100	164,100	:	22,100	94,200	186,200
1987F	88,900		69,000	157,900	:	16,500	85,500	174,400
Annual percent change								
1980	11.8		8.2	10.1	:	-1.8	7.6	9.7
1981	10.8		7.9	9.4	:	60.9	11.1	10.9
1982	4.1		4.0	4.1	:	92.6	11.8	7.8
1983	2.5		1.1	1.9	:	-30.0	-3.6	-6
1984	-8		-9	-8	:	-20.1	-3.0	-1.9
1985	-5.5		-10.6	-7.8	:	96.0	-1.0	-3.3
1986P	-5.4		-7.4	-6.3	:	30.6	-6	-3.1
1987F	-3.4		-4.3	-3.8	:	-25.3	-9.2	-6.3

P = preliminary. F = forecast. 1/ Excluding households.

farmer and lender concerns for loan security, real estate transactions have decreased, and real estate markets are presently very "thin." Lenders have become more conservative in assessing farmer real estate loan applications.

A substantial increase in 1986 CCC loans caused by commodity prices falling below CCC loan rates resulted in about a 30-percent increase in CCC debt outstanding in 1986 to \$22 billion. This is expected to be followed by a return in 1987 to the \$17-billion CCC outstanding level of 1985, as rising availability of marketing certificates leads to increased "redemption" of outstanding loans.

The reduction in total nonreal estate debt outstanding in both 1986 and 1987 reflects softening in the demand for loan funds as a result of fewer planted acres of major crops, lower input prices, continued reductions in capital expenditures, and the advancement of payments for program crops.

Current projections of farm input prices, expected use of inputs, and expectations for capital expenditures suggest that nonreal estate debt, excluding CCC, may fall another 3-5 percent in 1987, following a 6- to 8-percent drop in 1986.

Net Worth

The erosion of real estate values translates into declining net worth in an agricultural sector dominated by farmland assets. Total net worth in the sector fell again in 1986 for the sixth consecutive year to \$510-\$530 billion, compared with \$579 billion at the end of 1985. This was the lowest level of owner equity since 1977, in current dollars, and the lowest since the 1960's, in constant dollars. Equity levels are projected to decline again in 1987 (especially in the first half) since the drop in asset values is likely to be larger than the reduction in debt.

Returns to Assets and Equity

Current return on assets, 3.3 percent in 1985, is expected to decline in 1986 as income to assets falls at a slightly faster pace than asset values (table 10). In 1987, the current return on assets is projected to be about 3.5-3.9 percent, the highest rate of return earned since 1972-74. The total return on assets, including current income and capital gains, is expected to be positive for the first time since 1980.

Table 10.—Returns to assets and equity 1/

Year	Returns to assets			Return to equity		
	Capital:		Total	Capital:		Total
	Income	gains		Income	gains	
Percent						
1960-64	2.7	2.7	5.4	2.2	3.1	5.4
1965-69	3.2	2.5	5.7	2.6	3.0	5.6
1970-74	4.8	5.5	10.2	4.3	6.7	10.9
1975-79	2.7	7.7	10.4	1.5	9.3	10.7
1980-84	1.9	-4.9	-3.0	-0.1	-6.9	-7.0
1985	3.3	-11.1	-7.8	1.5	-14.4	-12.9
1986P	3.0	-7.4	-4.4	1.3	-9.9	-8.6
1987F	3.7	-3.1	0.6	2.1	-4.2	-2.1

P = preliminary. F = forecast. 1/ Excluding operator households. Totals may not add due to rounding.

Current returns as a percentage of equity value are also expected to improve in 1987, to perhaps the highest level since the mid-1970's but will remain low compared to the early 1970's.

Assessing the projected levels of current returns to both assets and equity in 1987 suggests that agriculture in the late 1980's is approaching a financial footing similar to the "pre-boom" 1960's. In this context, the stabilization of land values appears both critical and more imminent. Positive total returns to equity are not likely to be achieved until land prices stabilize. Positive current income returns, as are projected for 1987, perhaps can be viewed as a precondition for land price stabilization.

OPERATOR FINANCIAL STRESS

USDA surveys of farm costs and returns permit analysis of the financial position and cash flows of farm operators. The distribution of debt burdens by size can illustrate how widespread financial stress difficulties are in the sector.

The debt service approach to financial stress focuses on the interaction between the financial position of the firm and the firm's ability to service debt (table 11). A critical assumption is that erosion of lender asset recovery (of the asset base of stressed farms) continued to occur after 1985. Both the farm business and household are viewed to share responsibility to service operator financial obligations. Thus family consumption expense

(assumed to be \$15,400 annually) and reported off-farm income are included.

Categories of financial stress include farms with (a) a debt-asset ratio (D/A) between .4 and .7 and no debt service, (b) D/A between .7 and 1.0 and partial or no debt service, and (c) D/A greater than 1.0. Farms with D/A between .4 and .7 and minimal debt service (debt service ratio between 0 and .5) or farms with D/A between .7 and 1.0 and only adequate debt service (debt service ratio between 1.0 and 1.5) were not included.

Farm debt in the lower right section of table 12 is viewed to be financially stressed. The triangular shape of the lower right "stress" section indicates that strong cash flows compensate for weaker financial position (i.e., high debt ratios).

Only one of every two farms in a large USDA farm operator survey was estimated to service debt fully in 1985. Nearly four of ten farms were unable to pay either principal or interest. However, farms with debt to asset ratios less than .4 are not viewed as suffering financial stress because of their strong financial position. The overwhelming number of small farms (seven of every eight) with sales less than \$40,000 have debt to asset ratios less than .4.

Approximately 10 percent of surveyed farms were experiencing stress at the beginning of 1986. About 4 percent of farm operators were technically insolvent, their debts exceeding their assets. The stressed operators held one-third of farm debt (table 11). One-sixth of surveyed operator debt was held by technically insolvent operators. Financial stress difficulties were widely distributed among all-size operations with sales greater than \$40,000.

Commercial Size Farms

More than 90 percent of the debt of stressed operators is held by commercial size operators with either sales or farm production value greater than \$40,000. About 100,000-110,000 large operators—or one of every seven—were estimated to experience financial stress as of January 1, 1986 (table 12). This group had 35 percent of commercial farm operator debt outstanding, respectively 3 and 5 percent of positive net worth and cash

Table 11.--Farm operator debt by debt-asset ratio, debt service, and sales class, January 1, 1986

Debt-servicing capability	Debt-asset ratio				Total, all farms
	Less than				
	.4	.4-.7	.7-1.0	over 1.0	
Percent of farms					
Farms able to fully service debt					
Over \$500,000	3.3	2.9	1.8	1.0	
\$40,000 - 500,000	11.2	9.3	4.1	3.0	
Less than \$40,000	4.0	1.9	0.8	0.2	
All sizes	18.5	14.1	6.7	4.2	43.5
Farms able to partially service debt					
Over \$500,000	1.0	1.8	1.4	1.2	
\$40,000 - \$500,000	5.1	9.4	5.6	5.3	
Less than \$40,000	0.9	1.1	0.4	0.6	
All sizes	7.0	12.3	7.4	7.1	33.8
Farms unable to service debt					
Over \$500,000	1.0	1.1	0.4	0.3	
\$40,000 - \$500,000	4.6	3.9	2.3	3.9	
Less than \$40,000	2.3	1.3	0.6	0.8	
All sizes	8.0	6.3	3.3	5.0	22.6
Total, all farms	33.5	32.8	17.4	16.3	100.0 1/

1/ Based on FCRS estimates of farm operator debt for farm purposes, \$113,389 billion as of January 1, 1986.

balances, and respectively 100 and 43 percent of negative net worth and cash balances. An estimated 40,000-45,000 of these stressed commercial operators were technically insolvent, with debt exceeding assets.

Financially stressed commercial size operators paid \$2.8 billion interest expense in 1985, and had an estimated cash shortfall of \$4.5 billion. This illustrates the critical impact of interest expense on cash flows of operators with financial difficulty. Regarding socioeconomic characteristics, stressed farmers at the beginning of 1986 tended to be younger (average age 41) than commercial size farmers as a whole, had more dependents (3.7), more education (40 percent with some college), a lower share of real estate to total assets (54 percent), and both paid higher interest and received more Government direct payments in proportion to sales (22 and 7 percent respectively).

While about 65 percent of commercial-size stressed operators reside in the Northern Midwest and Northern Plains from Ohio to Kansas, this is 8 percent less than the proportion of commercial size operators in this region. On the other hand, the South had 20 percent of commercial operators and about 22 percent of the commercial operators in stress.

Outlook for Financial Stress

It is increasingly likely that (a) the height of the operator financial crisis was reached in 1985-86, (b) the degree of financial stress will lessen in the Midwest and tend to shift to the South, (c) farm operator losses to agricultural lenders during 1986-90 may reach \$6-\$10 billion, and (d) financial difficulties of operators are rapidly shifting to lenders.

Table 12.--Financial strength and stress among commercial-size farms, January 1, 1986

Farm category 2/	Debt-to-asset ratio				Total, all farms 1/
	: Low or no debt	: Moderate to high debt	: Very high debt	: Technically insolvent	
	: 0-4	: .4-.7	: .7-1.0	: 1.0 or more	
Percent					
FINANCIAL STRESS	:				
Farms	: -	4	5	7	: 15
Debt	: -	6	11	17	: 35
Positive net worth	: -	2	1	0	: 3
Negative net worth	: -	0	0	100	: 100
Positive cash balance	: -	0	0	5	: 5
Negative cash balance	: -	18	11	14	: 43
FINANCIAL STRENGTH	:				
Farms	: 68	14	3	-	: 85
Debt	: 31	27	7	-	: 65
Positive net worth	: 83	0	1	-	: 97
Negative net worth	: 0	0	0	-	: 0
Positive cash balance	: 77	14	5	-	: 95
Negative cash balance	: 46	0	0	-	: 57

1/ Farm with sales or value of production greater than \$40,000 in 1985. 2/ Farm categories are mutually exclusive.

The first point is suggested by changes in the degree of stress between January 1, 1985 and January 1, 1986. While the proportion of technically insolvent-stressed farms increased by more than 30 percent, solvent-stressed farms (i.e., those with moderate financial problems) fell more than 25 percent. The total number of stressed farms declined slightly in this period. It appears that while stress became severe for about one of six operators, about five of six operators were able to adjust financial and cost structure so as to avoid becoming financially endangered.

More than half of stressed commercial size farm operators resided in Iowa, Illinois, Minnesota, Missouri, Nebraska, North Dakota, and Wisconsin in 1985. However, the major improvement in hog and cattle returns, strong dairy earnings, excellent corn and soybean yields, and supportive corn and dairy

Government programs would appear to strengthen operators in these States. On the other hand, financial difficulties were most severe on a per farmer basis in the South in 1985. The combined effects of the prolonged 1986 drought and, to a lesser extent, the spillover from weakened energy prices suggest further deterioration in some areas of the South.

The severe difficulties of approximately 40,000 to 45,000 insolvent operators, combined with continued erosion of lender recovery of assets, suggest that from one-third to one-half of the \$17- to \$19- billion debt of insolvent operators may be subject to loss by lenders. While this estimate of \$6- \$10 billion in potential loan losses is highly speculative, large losses have begun to occur among farm lenders during the early and mid 1980's.

Provisions in bankruptcy statutes and voluntary restructuring of substantial operator debt will permit a sizable number of stressed operators to continue farming, although frequently on a smaller scale or with a new operation. However, these losses must be absorbed by farm lenders. They will become the burden of bank stock shareholders and also of borrowers paying interest rate premiums to compensate for bank loan losses. Another effect of large lender losses may be a steady tightening of credit. Reduced credit and relatively high real interest rates may become acute problems for beginning and expanding farmers in 1987 and beyond.

Farm Stress and Exits: New Survey Results

Results from several recent surveys show that the financial condition of farmers continued to worsen through 1986, although the rate of deterioration appears to be slowing. Based on opinion surveys, between 5.1 and 6.2 percent of farmers went out of business in 1986, substantially above the 3- to 4-percent exit rate of the early 1980's. Between 40 and 60 percent of these exits are believed caused by financial difficulties. Degrees of stress vary substantially by region and type of farming; cotton farmers and farmers in the Plains, Lake, and Southern States have been hit the hardest.

The American Bankers Association (ABA) 1986 midyear farm credit survey drew responses from 939 agricultural banks regarding the conditions of both their farm customers and farmers in their local lending areas. This is an opinion survey mailed to a probability sample (stratified by bank deposit size and region) of 2,744 commercial banks specializing in farm finance. Data presented here are unweighted survey responses. To qualify as an agricultural bank, an institution had to have more than \$2.5 million in total farm loans, or have more than 50 percent of all its loans supporting farm activity.

Nationally, 42.4 percent of the bankers reported increased farm loan delinquencies for the year ending in June 1986. But this is well below the previous year's estimate, when over 50 percent of the banks reported increasing delinquencies. Further, 26.1 percent expect

farm loan delinquencies to increase over the June 1986- June 1987 year, while about half expect delinquencies to remain at current levels. These expectations are less pessimistic than the preceeding year. Actual farm loan delinquency rates at all banks and other lenders are presented in the next section of this report.

The ABA respondents discontinued financing 5.6 percent of their farm borrowers as of mid- 1986, after dropping 4.5 percent in 1985 (table 13). While they anticipate discontinuing almost 7 percent in 1987, the rate of deteriorating expectations is falling. Another measure of creditworthiness, the proportion of farm customers loaned up to their practical limit, also deteriorated. Over 38 percent of the banks' farm borrowers were estimated to be in this position in mid-1986. However, this indicator too showed a smaller percentage-point increase than the previous year.

Nationally, agricultural banks estimated that 6.2 percent of farmers in their lending areas went out of business during the year ending in June, up substantially from the previous year's 4.8 percent. While perceived exits are rising at an increasing rate, there is some evidence suggesting that this is a lagging indicator of the sector's performance. About 68 percent were thought to have left because of financial problems, slightly less than in 1985. Responding bankers also estimated that 4.2 percent of local farm operators filed for bankruptcy over June 1985- June 1986, an increase only one- third the size of the June 1984- June 1985 jump.

On a regional level, the ABA survey reveals some diversity in farmers' financial experience. Most striking is the deterioration in the South, where all measures of stress are worse than national averages. Although problems in this region have been more severe on average for the past several years, the 1986 drought, cotton farm conditions, and the contraction in the energy sector appear to have accentuated southern farmers' difficulties.

Exit rates were estimated to be the highest in the South and West, where financial reasons were paramount for just under 80 percent of those leaving. Financial stress in

	United States '83 : '84 : '85 : '86	Northeast '83 : '84 : '85 : '86	South '83 : '84 : '85 : '86	Plains '83 : '84 : '85 : '86	West '83 : '84 : '85 : '86
Banks' farm borrowers who had bank financing discontinued (during the year ending June).....	2.9 3.4 4.5 5.6	2.7 3.5 4.7 6.2	2.5 3.0 3.8 4.8	3.0 3.7 4.4 5.1	3.3 2.8 3.8 5.7
Farm borrowers' banks expect to discontinue (during year ending June).....	2.0 3.1 5.7 6.7	1.8 3.2 6.0 6.8	1.5 3.0 5.3 5.5	2.6 3.4 5.8 6.5	2.1 3.1 4.7 5.9
Banks' farm borrowers loaned up to practical limit in June.....	28.1 32.8 36.7 38.8	26.7 30.1 34.4 37.1	26.0 31.2 34.7 34.3	27.0 30.7 35.1 39.8	32.1 39.5 43.8 44.4
Farmers in bank lending area who went out of business (year ending June).....	2.3 3.6 4.8 6.2	2.0 3.4 4.9 7.1	2.2 3.6 4.6 5.5	2.4 3.8 4.9 5.6	2.3 3.0 4.3 6.3
Liquidation categories (sum equals 100%)					
Normal attrition....	37.7 31.3 27.7 28.9	43.4 32.1 30.5 28.2	39.5 35.8 29.9 33.8	38.3 30.0 28.3 30.5	30.2 26.7 19.1 17.7
Voluntary liquidation.	42.4 44.0 44.3 41.7	38.9 45.3 46.0 41.7	38.6 40.1 42.3 36.9	45.5 45.5 45.2 42.5	48.7 50.4 45.3 46.7
Legal foreclosure.....	18.1 22.3 25.8 26.3	15.8 20.7 21.9 26.3	20.0 20.4 26.3 25.6	15.1 23.2 23.9 24.7	19.4 19.6 20.3 33.2
Other.....	1.8 2.4 2.2 3.1	2.4 1.0 1.5 3.8	1.7 3.1 1.5 3.7	1.1 1.7 2.6 2.3	1.7 1.7 5.3 2.4
Banks' farm borrowers who filed for bankruptcy (year ending June).....	NA NA 1.5 2.2	NA NA 2.0 1.7	NA NA 1.4 2.1	NA NA 1.0 2.5	NA NA 1.8 1.9
Farmers in bank lending area who filed for bankruptcy (year ending in June).....	1.1 2.6 3.8 4.2	1.0 2.6 4.0 3.9	1.0 2.3 3.3 4.0	0.9 2.3 3.7 6.5	1.2 2.3 3.5 3.5

1/ Data are unweighted averages of responses to the American Bankers Association midyear farm credit survey, which uses a stratified random sample (see text). For 1982 data see AF0-26. 2/ CT, DE, DC, ME, MD, MA, MI, MN, NH, NJ, NY, PA, RI, VT, WI. 3/ IL, IN, IA, MO, OH. 4/ AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, VA, WV. 5/ KS, NE, ND, OK, SD, TX. 6/ AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY. NA=Not available.

Source: American Bankers Association

the Northeast is also more pronounced. This probably reflects ABA's definition of the region, which includes Michigan, Minnesota, and Wisconsin.

Areas dominated by cotton farms show above-average financial stress, according to the banks' responses (table 14). The stress may be due in part to the loss of oil royalty income by those cotton farms in Texas, Louisiana, and Oklahoma, coupled with sharp cotton price declines. While dairy farming areas are no better off than most other farm areas, their performance does not appear to account for the problems in ABA's Northeast region.

A farmers' survey coordinated by the Midwest Association of State Departments of Agriculture (MASDA) and conducted in January 1986 also documents deteriorating agricultural financial conditions. Covering a nine-State area, it polled farmers regarding their financial status and plans. The States participating were Illinois, Iowa, Kansas, Michigan, Missouri, Ohio, Nebraska, North Dakota, and Wisconsin. Separate reports more fully describing the results for each State are available from each State's office of the State Agricultural Statistician.

According to the results of this farmer survey, delinquencies on farm real estate loans averaged about 10 percent for the area, ranging from a low of 6.2 percent in Ohio to a high of 17.6 percent in Kansas. Production loan delinquency rates ran somewhat higher, averaging 12.3 percent. They were highest in Michigan (at 15.6 percent) and lowest in Ohio (at 7.2 percent). As a general rule, delinquencies on all types of loans exhibit seasonality, and tend to be highest at the beginning of the year. Discounting for seasonal factors, however, still results in historically high delinquency rates.

These loan delinquency problems are related to the length of time operators expect to remain in farming. When asked how long they will remain in farming if current income and expense trends continue, 11 percent of North Dakota farmers said they could not remain past 1987. Almost 61 percent of these reported being delinquent on their farm loans. Yet less than 3 percent of those expecting to farm until retirement reported delinquent debt. The relationship between high

delinquent debt loads and plans to leave farming within the next year is not as clear. Some evidence suggests that lack of off-farm employment opportunities hampers the free exit of many operators.

When asked about more immediate plans, an average 5.1 percent of farm operators in the nine-State area expected to leave farming in 1986. Planned 1986 exits varied from a high of 6.4 percent in Nebraska to a low of 3 percent in North Dakota. Overall, financial problems were not identified as the main reason for expecting to cease operation. This varied markedly, however, by State and by farm size. For example, in Ohio, three-fifths of family-sized farm operators planning to quit cited financial reasons, compared with two-fifths of all those leaving. Operators anticipating giving up their farms in Missouri said that personal reasons dominated their decisions.

Results from different surveys should be compared with caution. The MASDA survey directly questioned farmers sampled from nine States and was completed in January 1986. The ABA survey, on the other hand, collected information from a national sample of farm bankers regarding the conditions of their farm borrowers and other farmers in their lending areas; responses through October are included in their results.

Moreover, the ABA survey concentrated on the year ending in June, whereas the MASDA survey focused on conditions at the beginning of the year. The higher ABA-estimated exit rate of 6.2 percent likely reflects these differences. Although the area covered by the MASDA survey covers three ABA regions, it includes all but one State in their Corn Belt region. Bankers in that region estimated that 5.5 percent expected exits. Also, farmers probably tend to be more optimistic about their prospects relative to bankers' estimates of farm performance.

AGRICULTURAL LENDERS

The financial problems of farm lenders continued to mount in 1986 as the financial difficulties of the farm sector increasingly passed to the lenders. The principal problem is declining farm asset values. This decline

Table 14.--Indicators of financial stress in agriculture as reported by farm banks, by type of farming area, 1983-86 1/

Item	: Feed & food crops			: Dairy			: Beef, cow-calf			: Beef, feedlots			: Hog, other livestock			: Cotton								
	'83	'84	'85	'83	'84	'85	'83	'84	'85	'83	'84	'85	'83	'84	'85	'83	'84	'85						
Bank's farm borrowers who had financing discontinued during the year ending June).....	2.7	3.4	4.3	5.5	3.1	3.2	5.4	5.4	3.9	3.1	3.4	5.8	2.2	5.1	6.0	5.7	2.6	2.7	3.8	3.9	3.5	3.7	8.6	7.1
Farm borrowers' banks expect to discontinue (during year ending June).....	1.9	3.2	5.8	6.6	1.9	2.7	5.4	5.8	2.4	3.3	5.8	7.9	1.6	4.7	7.8	5.7	3.7	2.9	4.7	4.2	2.5	1.8	7.2	11.6
Banks' farm borrowers loaned-up to practical limit in June).....	27.0	33.0	33.0	39.2	25.7	27.4	34.6	33.8	32.5	34.9	38.0	35.0	27.8	43.4	40.1	42.6	29.8	25.7	35.0	28.1	33.9	56.3	50.1	52.1
Farmers in bank lending area who went out of business (year ending June).....	2.2	3.6	4.8	5.9	2.6	3.5	4.8	7.3	2.4	3.5	4.9	6.4	1.9	3.9	4.1	5.4	1.9	3.5	4.5	4.8	2.8	3.0	6.7	8.1
Liquidation categories (Sum equals 100%)																								
Normal attrition....	37.4	33.0	27.6	29.7	41.3	31.8	32.0	29.6	32.4	28.0	28.9	26.9	36.6	21.9	15.5	18.7	44.9	31.1	21.6	36.3	26.4	19.3	18.2	17.2
Voluntary liquidation.	42.6	43.0	43.7	40.6	39.1	44.2	45.3	41.2	48.5	46.6	41.8	42.4	44.5	45.4	60.1	44.0	38.7	49.5	51.9	42.9	53.6	53.7	50.1	47.2
Legal foreclosure.....	18.4	21.8	26.7	26.6	16.8	20.5	20.1	24.5	18.0	22.5	28.8	28.5	18.3	30.7	22.0	34.8	14.5	17.1	22.2	20.5	19.1	25.3	28.8	30.7
Other.....	1.8	2.4	2.0	3.1	2.5	2.4	2.6	4.7	1.8	1.1	0.5	2.1	0.6	1.9	1.8	2.5	0.6	2.3	4.4	0.3	0.3	1.7	2.9	4.9
Banks' farm borrowers who filed for bankruptcy (year ending June)....	NA	NA	1.4	2.3	NA	NA	2.2	1.4	NA	NA	1.3	1.4	NA	NA	0.6	3.5	NA	NA	1.9	0.9	NA	NA	1.6	4.8
Farmers in bank lending area who filed for bankruptcy year ending in June.....	1.0	2.2	3.6	4.3	0.9	3.9	4.1	3.3	1.3	2.0	4.9	3.6	0.5	3.1	2.1	6.1	2.2	1.5	3.0	3.2	0.7	2.4	3.4	5.9

1/ Data are unweighted averages of responses to the American Bankers Association midyear farm credit survey, which uses a stratified random sample (see text). For 1982 data NA=Not available.

Source: American Bankers Association

has decreased the equity cushion that farmers have traditionally used as reserve borrowing capacity to get through years of unfavorable incomes. The combination of declining asset values and the large debt loads held by many farmers has subjected lenders to deepening financial stress as they are confronted with unsecured loans.

The problem of inadequate cash flow to fully service debts, a recurring problem for many farmers, has not worsened significantly in the 1980's. However, declining asset values have pushed many farmers into higher, more risky debt-asset ratios. Dealing with farm borrowers possessing severe problems poses a number of difficult choices for farm lenders. They typically are forced to undertake several steps to address the deteriorating quality of farm loans.

Some lenders can shift loan activity away from financially weak farmers toward nonfarm businesses. This strategy may be pursued in areas with a diversified economy, but it is not feasible in many agricultural areas or for lenders which serve agriculture exclusively, such as the Farm Credit System (FCS). Also, some lenders, such as commercial banks, which can shift loanable funds away from agriculture, may nevertheless decide not to, because rejecting farm loans could force some farmers into bankruptcy and convert outstanding problem loans into actual losses. Thus, such lenders may extend additional credit to farmers with cash flow problems, hoping that their financial plight will improve enough to repay their loans.

But extending additional credit to risky borrowers reduces the overall quality of a lender's portfolio. Depending upon local market conditions, lenders serving agricultural areas may raise their interest rates or collateral requirements, or both, to all their loan customers, so as to alleviate the higher costs of serving risky farm borrowers and to minimize the possibility of additional loan problems. These steps can drive the financially sound borrowers to find other credit sources, thus compounding the problems for the original lender.

When loan quality deteriorates, lenders must set aside larger reserves to cover anticipated loan losses. This can lower lender

income and profits unless other steps are undertaken, such as raising interest rates charged borrowers. Despite the several measures that lenders may undertake to address farm loan quality problems, there is no alternative in many instances but to deny highly leveraged farmers additional credit to meet their repayment shortfalls. What is most important for commercial farm lenders is that these farm loan difficulties may cause them to face large loan losses. This can, in some cases, push lenders into financial stress or insolvency.

The focus of this section is on the major institutional farm lenders with a look at: (1) current lender loan portfolios, (2) recent credit policy developments, and (3) the current agricultural lender outlook.

Current Lender Portfolios

Table 15 summarizes how the \$186.2 billion in total farm debt, excluding operator households, was distributed by lender on December 31, 1986. Individuals and others are estimated to hold 20.2 percent of the total. The largest institutional category is commercial banks, with 22.4 percent. The Federal Land Banks (FLB's) follow closely with 19.4 percent. The various parts of the Farm Credit System together account for 25.7 percent of all farm loans, making the FCS the dominant farm lender.

Data from USDA's most recent Farm Costs and Returns Survey (FCRS), conducted in February and March 1986, show the distribution of debt owed by farm operators by debt-asset ratio and lender on January 1, 1986 (table 16, figure 11). Some 33.7 percent of all the debt was held by financially stressed operators with debt-asset ratios of 0.71 or higher. This debt totaled nearly \$38 billion. A total of 16.3 percent, or \$18.3 billion of the debt was held by technically insolvent operators with debt-asset ratios over 1.0.

Three lender categories—commercial banks, FLB's, and the Farmers Home Administration (FmHA)—held about \$73 billion (64.4 percent) of the total \$113.4 billion in farm operator debt. Nearly \$13 billion or 17.7 percent of the debt held by these three lenders was owed by farm operators with debt-asset ratios greater than 1.0. By lender,

Table 15. -- Distribution of farm debt, excluding operator households, by lender,
December 31, 1986 1/

Lenders	Type of debt		Total
	Real estate	Nonreal estate	
	Percent of total		
Commercial banks	6.1	16.3	22.4
Farm Credit System	19.4	6.3	25.7
Federal Land Banks	19.4	---	19.4
Production Credit Associations	---	6.1	6.1
Federal Intermediate Credit Banks 2/	---	0.2	0.2
Farmers Home Administration	5.5	8.7	14.2
Life insurance companies	5.6	---	5.6
Individuals and others 3/	12.8	7.4	20.2
Commodity Credit Corporation	---	11.9	11.9
Total	49.4	50.6	100.0

1/ Preliminary. Due to rounding some subcategories may not add to totals. 2/ Financial institutions other than PCA's that obtain funds from the FICB's. 3/ Includes Small Business Administration farm loans.

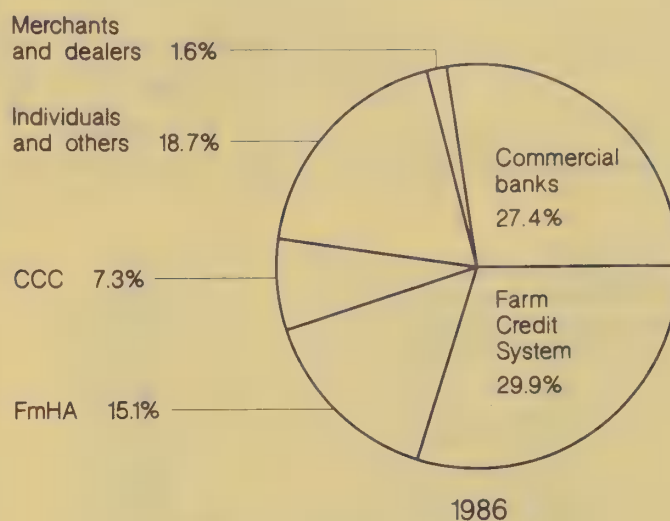
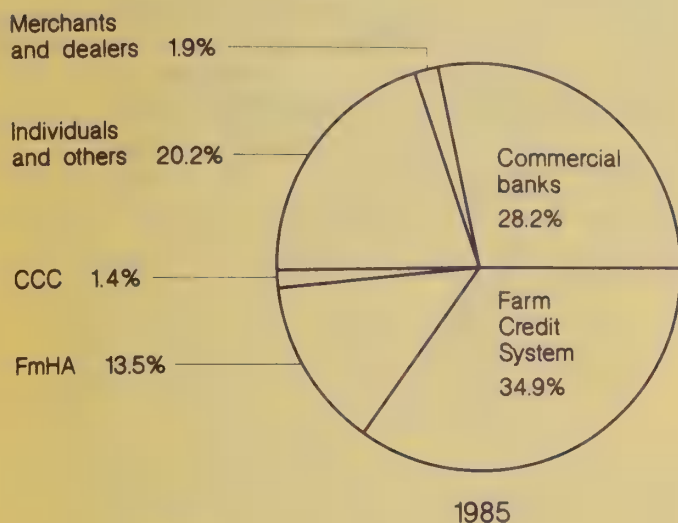
Table 16. -- Distribution of debt owed by farm operators by debt-asset ratio and lender,
January 1, 1986 1/

Lender	Debt-asset ratio				Jan. 1, 1986, all farms	Jan. 1, 1986, avg. debt-asset ratio	Total debt, Jan. 1, 1986 2/
	0 to 0.40	0.41 to 0.70	0.71 to 1.0	Over 1.0			
	Percent					Ratio	Mill. dollars.
Commercial banks	38.7	33.8	13.8	13.7	100.0	35.2	31,062
Farm Credit System	35.0	35.0	19.1	10.9	100.0	37.2	33,949
Federal Land Banks	32.5	35.5	21.4	10.6	100.0	40.1	25,142
Production Credit Associations	42.0	33.5	12.7	11.8	100.0	34.3	8,807
Farmers Home Administration	15.4	28.6	20.7	35.3	100.0	55.0	17,082
Commodity Credit Corporation	32.2	36.2	17.8	13.9	100.0	46.3	8,253
Merchants and dealers	41.3	24.0	17.0	17.7	100.0	42.1	1,860
Individuals and others	39.1	31.1	17.0	12.9	100.0	35.4	21,183
All farms	33.5	32.8	17.4	16.3	100.0	31.5	113,389

1/ Numbers may not add because of rounding. 2/ The debt figures carried in USDA's farm sector balance sheet for December 31, 1985, are greater than those reported from USDA's Farm Costs and Returns Survey. The difference amounts to \$91.5 billion or 44 percent of the balance sheet debt. Much of this difference can be explained by the conceptual differences underlying the debt figures from the two sources. The balance sheet debt is defined as all loans outstanding that are secured by farm real estate, including loans on the farmer's dwelling if it is located on the farm, plus all nonreal estate farm loans. These are defined by each lender, and definitions vary. In contrast, the FCRS asks farm operators to list only their farm business debt. The definitional differences between the sector balance sheet and the FCRS include the debt of farmers on farm dwellings, the farm debt of landlords, and the debt defined as farm sector debt but used for nonfarm purposes. The debts on these three components are carried in the balance sheet but are not included in the FCRS. For details of the differences in the two surveys, see Financial Characteristics of U.S. Farms, January 1, 1986, Agricultural Information Bulletin 500, USDA, ERS, Aug. 1986.

Source: 1986 Farm Costs and Returns Survey.

Figure 11

Farm Operator Debt by Lender

Source: 1986 Farm Costs and Returns Survey.

the largest percentage of farmers with debt-asset ratios of over 1.0 was the 35.3 percent of FmHA; the FCS was lowest with only 10.9 percent of its portfolio held by technically insolvent operators. A total of 56.0 percent of FmHA debt was held by farms with debt-asset ratios greater than 0.71. The comparable figure was 27.5 percent for commercial banks.

The FCRS data also may be employed to examine borrowers by cash flow status as well as debt-asset ratio to take a further look at the farm lenders' portfolio quality (table 17). A total of 45.0 percent of outstanding FmHA debt was held by operators with debt-asset ratios over 70 percent and negative cash flows. Comparable figures for commercial banks and the FCS were 17.1 and 17.6 percent, respectively.

Borrowers with negative cash flow comprised 61.7 percent of the FmHA portfolio, compared with 46.9 percent for commercial banks and 43.3 percent for the FCS. Thus, the FCRS data show that the FmHA loan portfolio is both weaker and riskier than that held by the other major lenders. This is expected, given that FmHA is the farm sector's lender of last resort.

The bottom line for farm lenders is the amount of loan losses (charge-offs) that they have to absorb. The loan loss figures show some of the financial weakness that exists in

the various lenders' farm loan portfolios. Farm loan losses for the three major farm lenders for 1984-86 are shown in table 18. It is interesting to note that the absolute amount of losses experienced by the commercial banks was higher than for the FCS as a whole only during the 1984-85 period. The relative amount of loan losses (charge-offs as a percent of loans outstanding), however, was higher for commercial banks than the FCS as an entity throughout 1984-86. This reflects the greater share of land loans in the FCS portfolio. These have traditionally been the loans farmers strive hardest to keep current. They also take longer to close out when they do require collection. FmHA loan losses, due in large part to a policy of extreme loan foreclosure forbearance, have been low throughout the 1984-86 period.

Recent Developments In Agricultural Lending

Since 1982, agricultural lenders have experienced increasing levels of loan losses and problem loans, resulting in greatly reduced earnings. In this section, 1986 developments for the major institutional lenders are compared with the earlier years of the 1980's.

Commercial Banks

Commercial banks specializing in agricultural finance suffered increasing loan delinquencies and charge-offs over the past

Table 17. -- Portfolio quality: Distribution of farm operator borrowers, debt outstanding, and cash flow status for selected farm lenders, January 1, 1986 1/

Lender	Financial stress category		
	Borrowers with debt- asset ratios of over 70 percent	Borrowers with negative cash flow 2/	Borrowers with both negative cash flow and debt-asset ratios over 70 percent
	Percent		
Commercial banks			
Farm operator borrowers	15.9	46.9	9.2
Lender debt outstanding	27.4	50.7	17.1
Farmers Home Administration			
Farm operator borrowers	34.4	61.7	24.4
Lender debt outstanding	56.8	68.8	45.0
Farm Credit System			
Farm operator borrowers	17.5	43.3	9.8
Lender debt outstanding	30.2	48.3	17.6
Federal Land Banks			
Farm operator borrowers	19.9	42.6	11.2
Land debt outstanding	31.9	48.6	18.6
Production Credit Associations			
Farm operator borrowers	15.1	45.9	8.8
Lender debt outstanding	25.4	47.5	14.7
Commodity Credit Corporation			
Farm operator borrowers	23.1	34.7	10.7
Lender debt outstanding	32.1	26.6	9.6
Merchants and dealers			
Farm operator outstanding	25.3	48.7	15.4
Lender debt outstanding	35.3	51.0	22.6
Individuals and others			
Farm operator borrowers	16.7	39.8	9.5
Lender debt outstanding	28.7	48.2	18.0
All lenders			
Farm operator borrowers	14.1	44.9	8.4
Lender debt outstanding	33.4	50.6	21.2

1/ Data obtained from FCRS 1986 expenditures version 1 for farm operators reporting debt. 2/ Net cash flow after subtracting operating and living expenses and principal payments from farm and off-farm cash income.

Source: USDA Farm Costs and Returns Survey.

Table 18. -- Lender farm loan losses (net charge-offs), 1984-86

Lender	Year				
	1984	1985	1986		
			Quarter 1	Quarter 2	Quarter 3
Million dollars (As a percent of loans outstanding at end of period) 1/					
Commercial banks 2/	900(2.2)	1,300(3.7)	235(0.7)	355(1.0)	NA(NA)
Farm Credit System 3/	428(0.5)	1,105(1.6)	276(0.4)	432(0.7)	267(0.4)
FLB/FLBA	110(0.2)	576(1.2)	184(0.4)	350(0.8)	217(0.5)
FICB/PCA	308(1.6)	514(3.4)	90(0.7)	84(0.6)	49(0.4)
Bank for Cooperatives	10(0.1)	15(0.2)	2(0.02)	(2)(0.02)	1(0.01)
Farmers Home Administration 4/	55(0.5)	146(1.2)	NA(NA)	125(0.8) 5/	NA(NA)
Exhibit: Foreclosures					
Life insurance companies 6/	289(2.5)	530(4.8)	NA(NA)	305(2.9) 7/	NA(NA)

NA = Not available. 1/ Loan loss data rounded to the nearest million dollars. 2/ Calendar year data for farm production loans. 3/ Calendar year data. 4/ Fiscal year data beginning October 1. 5/ Fiscal year total through March 31. 6/ Loan charge-off data are not available for life insurance companies. 7/ Calendar year data through June 30.

Source: American Council of Life Insurance, Board of Governors of the Federal Reserve System, Farm Credit Corporation of America, and Farmers Home Administration.

year, and rates of return on both equity and assets fell as a result. There are some indications, however, that the rate at which agricultural banking conditions are worsening is beginning to moderate.

While the number of agricultural banks declared insolvent and closed annually continues to increase, the proportion of closed banks that are agricultural may have peaked in 1985. This is also true for agricultural banks identified as vulnerable by the Board of Governors of the Federal Reserve System (FRB): their number is rising, but the proportion is down. Rather than positive signals for farm banking, these reflect accelerating problems at nonagricultural banks concentrated in the Southwest and Central regions of the Nation. Because over two-fifths of all bank farm loans are made by nonagricultural banks, these problems may also have negative implications for the future availability of farm credit.

There are two generally accepted definitions of agricultural banks. The first identifies agricultural banks as those with farm loans (both production and real estate) accounting for 25 percent or more of their loan portfolios. This definition is employed by the Federal Deposit Insurance Corporation (FDIC) and has been used in Federal legislation. Second, the FRB classifies a bank as agricultural if its ratio of farm loans (both production and real estate) to total loans exceeds the unweighted average of such ratios at all banks on the date specified (16.21 percent on June 30, 1986).

Although neither definition imposes a size limit, nearly all banks identified as agricultural by these definitions have less than \$500 million in assets. Consequently, nonagricultural banks with below \$500 million in assets comprise a useful comparison group. The less restrictive FRB definition classifies over 1,100 more banks as agricultural than the FDIC definition (table 19). Unless otherwise stated, the FRB definition is used throughout this section. It is preferred because FRB-designated agricultural banks, as a group, hold a majority of total commercial bank-owned farm credit. As of June 30, 1986, these banks together held about 58 percent of all agricultural loans made by banks.

Using either definition, the number of agricultural banks has declined over the last 4 years, along with the average farm loan ratio for all banks. This, in part, is caused by some individual banks reducing their risk exposure to farm sector developments through diversification. It also reflects the ongoing decline in total farm debt observed over this period and growth in other loan categories.

Total farm debt held by all commercial banks also continues trending downward, dropping about 8 percent during the year ending in June 1986. While total farm debt held by banks began falling in 1985, bank loans backed by farm real estate continued rising through the second quarter of 1986. This perhaps reflects increased defections from the Federal land banks as well as production loans for which real estate collateral is now requested.

Despite the ongoing problems and adjustments associated with agricultural loans, there is little evidence that commercial banks as a group are making major portfolio changes to substantially reduce their agricultural exposure. Farm loans at agricultural banks averaged 35.2 percent of their total loans at mid-1986, down only slightly from 37.3 percent over the previous 18 months. Commercial banks remain good sources of credit for farmers in solid financial positions. Farm credit terms and creditworthiness requirements, however, have become more stringent.

Agricultural production loan quality continues to deteriorate for the commercial banking system but the rate of deterioration appears to be slowing. As of June 30, 1986, 10.5 percent of all bank-held farm production loans (by volume) were delinquent, up 1.9 percentage points over a year earlier (table 20). This \$200-million increase between mid-1985 and mid-1986 is smaller than the previous year's increase, when delinquencies rose \$1.2 billion and accounted for 8.6 percent of all bank production loans. Most of the recent increase continues to be in the nonaccrual category, which is the least desirable because full repayment is not expected on these inadequately secured loans.

The quality of overall loan portfolios at agricultural banks continued to decline with

Table 19. -- Comparison of definitions of agricultural banks, 1982-86 1/

Item	Dec. 1982	Dec. 1983	Dec. 1984	June 1985	Dec. 1985	June 1986
Commercial banks	14,418	14,427	14,410	14,394	14,283	14,184
Agricultural banks, FRB definition	5,156	5,115	4,987	4,965	4,847	4,836
FRB-required farm loan ratio (percent)	17.74	17.56	16.97	16.93	16.14	16.21
Agricultural banks, 25% or more farm loans	4,112	4,065	3,922	3,930	3,682	3,691

1/ Includes domestically chartered, FDIC-insured commercial banks with nonzero deposits.

Source: Calculated from the Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

the deterioration of agricultural loan quality. However, the rate of problem loan increase at these banks has slowed, growing only slightly faster than loan problems at nonagricultural banks. Moreover, overall delinquency rates have grown more slowly than those for agricultural loans. This is despite problems in the energy- and export-sensitive sectors, which have led to increased delinquency rates reported by nonagricultural small banks in the last 2 years.

Delinquent loans at agricultural banks accounted for 7.0 percent of all loans held by these banks in June 1986, an increase of 0.6 percentage points from the previous year but considerably below the 10.5-percent rate for farm production loans at all banks (tables 20 and 21). That agricultural banks are under relatively more pressure is shown by comparing the trend in their total loan delinquency rates to those rates for small nonfarm banks. After reaching a low of 4.0 percent in mid-1984, total delinquencies at nonfarm small banks reached 4.9 percent of loans by mid-1986, increasing a little more than half as fast as delinquency rates at agricultural banks.

Examining net loan charge-offs together with delinquency rates gives a more complete picture of commercial bank difficulties. Net charge-offs at the average agricultural bank totaled 2.12 percent of loans in 1985, representing almost a full percentage point increase over 1984 (table 22). At 0.86 percent of loans for the first half of 1986, agricultural bank charge-offs for all of 1986 will probably top the previous year's rate, but by less than

the 1984-85 increase. Such loss rates are very damaging; loan losses above 2.5 percent of loans outstanding would exceed gross income at the typical farm bank and start to erode equity capital.

Net loan charge-offs at nonagricultural small banks have increased sharply since mid-1985, averaging 0.67 percent of loans for the first-half of 1986. This is more than double the rate reported for the first half of 1985. Although still below the charge-off rate at farm banks, continued uncertainty about future conditions in the energy and export-sensitive sectors of the economy, as well as many real-estate markets nationwide, heighten concern about these banks.

Providing some contrast, net charge-off rates for agricultural production loans at all banks have increased, but the rate of increase is down by a half. After almost doubling in the first half of 1985, losses on these farm loans totaled \$590 million for the first 6 months of 1986, up a modest \$20 million from a year earlier. Trends in farm production loan losses at all banks are consistent with total losses at agricultural banks and suggest that losses at nonfarm banks are not dominated by their farm loans.

Developments in capital, loss provision, and income positions at banks reinforce conclusions based on delinquency and loss data. Reflecting current losses and the need to set aside reserves for expected future losses, agricultural banks' average rate of return on equity capital (roe) dropped 3 percentage points to 6.0 percent between 1984

Table 20. -- Estimated delinquent farm production loans as a percentage of total farm production loans, 1983-86 1/

Type of loan	June 1983	June 1984	June 1985	June 1986
Percent				
Total delinquent	4.7	6.5	8.6	10.5
Past due 30-89 days and still accruing	1.3	1.5	1.7	1.7
Nonperforming	3.4	5.0	6.9	8.8
Past due 90 days or more and still accruing	1.3	1.5	1.7	1.9
Nonaccrual	2.1	3.5	5.2	6.9

1/ Data are estimates of national percentages for farm non-real estate loans. Estimates from June 1985 onward are based on reports from banks holding approximately 92 percent of such loans. Previously, only large banks, which held about one-fourth of these loans, reported data for the nonaccrual and renegotiated categories of these loans. In order to ensure comparability, these two categories were estimated for nonreporting banks by Board of Governors of the Federal Reserve System research staff.

Source: "The Farm Credit Situation and the Status of Agricultural Banks," Emanuel Melichar, Senior Economist, Board of Governors of the Federal Reserve System, presented at the annual meeting of the Regional Research Project NC-161, "Evaluating Financial Markets for Agriculture," St. Paul, Minn., October 7, 1986.

Table 21. -- Delinquent loans as a percentage of total loans by type of bank, 1983-86 1/

Type of loan delinquency	June 1983		June 1984		June 1985		June 1986	
	Agricul-	Nonag	agricul-	Nonag	Agricul-	Nonag	Agricul-	Nonag
	tural	small	tural	small	tural	small	tural	small
	banks	banks	banks	banks	banks	banks	banks	banks
		2/						
Percent								
Total	4.6	4.6	5.3	4.0	6.4	4.5	7.0	4.9
Past due 30-89 days and still accruing	2.0	2.2	2.1	2.0	2.2	2.2	2.2	2.3
Nonperforming--total	2.7	2.5	3.2	2.1	4.1	2.3	4.7	2.6
Past due 90 days and still accruing	1.6.	1.3	1.6	1.0	1.6	.9	1.6	1.0
Nonaccrual	1.0	1.2	1.6	1.1	2.5	1.4	3.1	1.6

1/ Data in this and subsequent commercial bank tables are unweighted averages at all banks in each specific category. 2/ Banks with less than \$500 million in assets which, were not considered "agricultural" by the FRB definition.

Sources: "Financial Condition of the Farm Sector and Financial Institutions," James Johnson, Emanuel Melichar, and C. Edward Harshbarger; paper presented at the symposium on Financial Stress in Agriculture: Issues and Implications, Kansas City, MO., Nov. 24, 1986, and Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

Table 22. -- Net loan charge-offs by type of loan and type of bank, 1983-86 1/

Type of loan	1983		1984		1985		1986
	Q2	Q4	Q2	Q4	Q2	Q4	Q2
Percent							
Net loan charge-offs as ■ per- cent of total loans--agricul- tural banks	0.30	0.63	0.39	0.83	0.72	1.40	0.86
Net loan charge-offs as ■ per- cent of total loans--nonag small banks	.28	.38	.23	.37	.29	.52	.67
Net charge-offs of farm pro- duction loans as ■ percent of production loans--all insured commercial banks 2/	NA	NA	.7	1.5	1.3	2.1	1.7

NA = Not available. 1/ Data represent conditions at the end of the period. Annual charge-off rates may be computed by summing Q2 and Q4 rates. 2/ Data are estimates of national charge-offs of farm nonreal estate loans, based on reports from banks which hold about 92 percent of these loans. Additional uncertainty arises as to these estimates because small banks report only charge-offs of "agricultural" loans as defined by each bank for its internal purposes. Banks first reported these data in the March 1984 Report of Income.

Sources: Melichar, Emanuel, "Agricultural Banking Experience, 1985," Board of Governors of the Federal Reserve System, March, 1986, revised appendix data as of November 1986, and Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

and 1985 (table 23). For the first time in over 4 years, nonagricultural small banks averaged a 1.0 percentage point roe decline in 1985, although the roe is now almost double that of farm banks.

Average rates of return on assets (roa), which avoid distortions resulting from the extreme values often encountered with average roe's, also show the continued deterioration of agricultural bank profitability. Prior to 1984, agricultural banks were more profitable than their nonfarm counterparts if roa's were compared; this is no longer the case regardless of the yardstick used. Nonagricultural small banks maintained their average 1984 roa in 1985. Because the most serious part of the energy sector contraction has occurred since late 1985 and because lags are common in banks' loss recognition, this result is not entirely unexpected.

Explaining, in part, their deteriorating profit record, agricultural banks increased their capital reserves in 1986 for the fourth consecutive year (table 23). On average, total (primary plus secondary) capital rose to a

record 9.6 percent of assets in 1985, more than a full percentage point above the rate at small nonfarm banks. The capital ratio at nonagricultural small banks remained steady between 1984 and 1985 at 8.5 percent, matching its 1982 value. This measure of bank capital, used in the capital adequacy requirements introduced by the Federal bank regulatory agencies in 1984, includes equity and the allowance for loan losses but excludes intangibles like good will. The increasing trend in capitalization rates at agricultural banks, most of which was achieved by building up loss reserves out of gross income, improves their ability to withstand anticipated future farm loan problems.

Annual provisions for loan losses (money taken from current gross income and added to loan loss allowance accounts, which are meant to cover impending loan charge-offs) rose at agricultural banks to an average of 2.42 percent of total loans in 1985, from 1.47 percent in 1984 (table 23). Provisions for loan losses have been running higher than net charge-offs by a widening margin at agricultural banks over the past 3 years, suggesting that agricultural bankers have been

Table 23. -- Selected bank performance measures by type of bank, 1982-85 1/

Performance measure	1982	1983	1984	1985
	Percent			
Rate of return on equity capital				
Agricultural banks	14.0	11.0	9.0	6.0
Nonag small banks	12.0	12.0	12.0	11.0
Rate of return on total assets				
Agricultural banks	1.1	1.0	.7	.5
Nonag small banks	.9	.9	.8	.8
Provisions for loan losses as a percent of total loans				
Agricultural banks	0.79	1.09	1.47	2.42
Nonag small banks	.77	.79	.77	1.02
Capital as a percent of assets				
Agricultural banks	9.3	9.4	9.5	9.6
Nonag small banks	8.5	8.4	8.5	8.5

1/ Rate of return on equity is net income after taxes as a percent of the average of total equity capital at the beginning and end of the year. Rate of return on total assets is net income after taxes as a percentage of total assets on December 31.

Source: Melichar, Emanuel "Agricultural Banking Experience, 1985," Board of Governors of the Federal Reserve System, March 1986, and revised appendix data as of November 1986.

expecting to take more serious losses than have actually occurred. Additionally, such growth may reflect farm bankers' increased uncertainty regarding future Federal farm support programs, and thus their debtors' debt-servicing capabilities.

For the first time in 3 years, provisions for loan losses increased markedly at small nonagricultural banks in 1985, to 1.02 percent of total loans. This is consistent with elevated loss rates these banks have experienced since mid-1985 and should somewhat mitigate the consequences of contractions experienced in 1986 in the energy and related sectors. Their loss provision rate still averages less than half the rate at agricultural banks, however.

Average performance measures for all agricultural banks mask considerable variations in individual bank conditions. A minority of agricultural banks account for a disproportionate share of the problems of all farm banks, but the share undergoing severe stress has been growing (table 24). At the end of 1985, for example, over 25 percent of all farm banks reported net charge-off rates in excess of 2.5 percent of loans; only 4.5

percent of agricultural banks reported such high loss rates in 1982. Nonetheless, over 40 percent were still able to keep losses under 1.0 percent of loans in 1985.

Agricultural bank problems are also concentrated geographically. In each of 12 contiguous heartland States, agricultural banks have average ratios of nonaccrual loans to total loans exceeding the national farm bank average. The States--Colorado, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota, Oklahoma, South Dakota, Wisconsin, and Wyoming--are in several regions where farm banks represent a larger share of the local banking system. Moreover, this spatial disparity is a recent development; agricultural bank conditions in these States did not differ substantially from farm banks nationally before 1983.

Three of these States are also in the five-State area identified by Federal bank regulators as having the most stressed energy banks. While data on bank exposure to the oil and gas sectors are not publicly available, the majority of banks with energy credits exceeding 25.0 percent of capital are in

Table 24. -- Distribution of agricultural banks by relative net charge-offs, 1982-85 1/

Net charge-offs as a percentage of total loans	Distribution of banks			
	1982	1983	1984	1985
	Percent			
Under 0.10	27.7	25.2	18.5	10.6
0.10 to 0.49	32.0	28.2	23.6	14.5
0.50 to 0.99	19.9	20.5	20.0	18.0
1.00 to 2.49	15.8	18.6	23.9	30.2
2.50 to 4.99	3.5	5.5	9.2	16.1
5.00 and over	1.0	2.1	4.8	10.5

1/ As of December 31.

Source: See note to table 21.

Colorado, Kansas, Louisiana, Oklahoma, and Texas. Often above-average in asset size, these energy banks tend not to meet the technical agricultural bank definition although many have substantial volumes of farm loans. Overall, banks in this stressed energy bank region accounted for over 20 percent of all farm loans made by banks as of mid-1986. Almost 30 percent of the roughly 3,800 banks in the five-State region are agricultural.

Conditions at banks in this five-State region dominated by farm- and energy-sector contractions had deteriorated by late 1985. Sharp declines in performance at nonagricultural small banks were posted by midyear 1986. Performance changes at agricultural banks in the stressed energy bank region were mixed, however. Overall, agricultural banks in this region compare favorably to farm banks elsewhere, and appear to be in a better position to operate under difficult circumstances than the region's nonfarm small banks.

These regional and sectoral problems have led to increased numbers of banks with serious difficulties on a national level. Two indicators most commonly used to identify troubled banks are analyzed below. Both have shown unprecedented increases over the past few years.

The FRB identifies the most troubled institutions, called vulnerable banks, as those with nonperforming loans greater than total capital. Study has shown that this condition is the best single predictor of future insolvency and closure (i.e., failure). As of June 30, 1986,

364 banks were in this condition, 54.1 percent of them were agricultural (table 25). While most of the growth in this category is attributable to newly troubled farm banks, this may not be true much longer. The share of vulnerable banks that are agricultural may have peaked at 56.3 percent in mid-1985. The number of vulnerable nonfarm banks rose by 37 in the first half of 1986. Not surprisingly, over 70 percent of them are in the stressed energy bank region.

A more widely known indicator of severe bank stress is the FDIC's official problem list--banks judged to be in serious difficulty and in need of close scrutiny by bank regulators. Growth in the FDIC problem list since 1980 has been dramatic (table 26). The 1,450 commercial banks on the list at the end of October 1986 represent almost a sevenfold increase since the beginning of the decade. While the proportion that is agricultural grew rapidly between 1983 and 1985, it appears to have stabilized at around 40 percent. Moreover, most problem banks identified by the FDIC are concentrated in heartland States. This agrees with other indicators of bank stress and reflects the problems of the sectors which dominate the central part of the United States.

Bank regulators declared insolvent and closed 103 banks in the first three quarters of 1986 (table 27). While just under half were agricultural banks, the proportion is down from 1985 when almost 60 percent of the 118 closed banks had specialized in farm finance. On a regional level, 55 percent of all bank closures over the past 4 years were in the

Table 25. -- Vulnerable commercial banks, 1983-86 1/

Type of bank	1983		1984		1985		1986
	Q2	Q4	Q2	Q4	Q2	Q4	Q2
	Number						
Agricultural	34	40	68	93	144	141	197
Nonagricultural	93	102	85	94	112	130	167
Total banks	127	142	153	187	256	271	364

1/ Vulnerable banks are defined as those with nonperforming loans greater than total capital. Loans past due 90 days and loans in nonaccrual status are considered nonperforming.

Source: Division of Research and Statistics, Board of Governors of the Federal Reserve System.

Table 26. -- FDIC-classified problem commercial banks by type of bank, 1980-86 1/

Date	Agricultural banks	All other banks	Total banks
	Number		
Dec. 1980	NA	NA	212
Dec. 1981	NA	NA	196
Dec. 1982	NA	NA	326
June 1983	106	375	481
Dec. 1983	146	457	603
June 1984	231	440	671
Dec. 1984	288	512	800
June 1985	334	606	940
Dec. 1985	437	661	1098
June 1986	524	797	1321
Sep. 1986	574	839	1413
Oct. 1986	594	856	1450

1/ Problem bank classification by the FDIC is based on the CAMEL rating system used in individual bank examinations. CAMEL is a mnemonic for the key attributes of a bank's condition. They are: capital adequacy, asset quality, management ability, earnings power, and liquidity. Each bank gets an overall rating based on its performance in these five categories. Ratings range from 1 (sound in almost every respect), to 5 (high probability of failure). Banks with ratings of 4 (serious weakness and potential for failure) or 5 are placed on the problem list. FDIC agricultural bank definition used in this table. FDIC-classified problem mutual savings banks are excluded. Savings and loan associations are not regulated by the FDIC and thus do not appear on its problem list. NA=Not available.

Source: Division of Research and Strategic Planning, Federal Deposit Insurance Corporation.

Table 27. -- Commercial bank closures by type of bank and by region, 1980-86 1/

Closed bank's location	All banks						Agricultural banks 2/					
	1983	1984	1985	1986	Total	Share 3/	1983	1984	1985	1986	Total	Share 3/
	---Number---					Pct.	---Number---					Pct.
United States	44	77	118	103	342	100.0	7	31	69	40	155	100.0
Northeast	1	0	2	0	3	0.9	0	0	0	0	0	0.0
Lake States	1	5	7	3	16	4.7	0	2	7	2	11	7.1
Corn Belt	7	12	23	17	59	17.3	2	6	20	14	42	27.1
Northern Plains	3	13	26	18	60	17.5	2	10	24	17	53	34.2
Appalachian	13	13	5	4	35	10.2	0	2	1	2	5	3.2
Southeast	1	3	4	4	12	3.5	1	1	0	0	2	1.3
Delta States	1	4	1	6	12	3.5	1	2	0	1	4	2.6
Southern Plains	4	11	25	29	69	20.2	0	5	11	9	25	16.1
Mountain	4	5	15	18	42	12.3	1	3	3	3	10	6.5
Pacific	9	11	10	4	34	9.9	0	0	3	0	3	1.9
Stressed energy bank region 4/	6	21	39	52	118	34.5	0	12	19	22	53	34.2

1/ Bank closures are FDIC-insured commercial banks that were closed due to financial difficulties. Banks receiving open-bank assistance (i.e., Continental Illinois in 1984), merged to prevent closure, or located in U.S. possessions or territories are excluded. Closures for 1986 are as of September 30. 2/ For a closed bank to be classified as an agricultural bank it had to have an above-average farm loan ratio in December of the year preceding closure. 3/ Percentages are based on aggregations of banks for 1983 through the third quarter of 1986. 4/ Includes bank closures from Colorado, Kansas, Louisiana, Oklahoma, and Texas.

Source: Calculated from information provided by the Federal Deposit Insurance Corporation and the Report of Condition and Report of Income files, Board of Governors of the Federal Reserve System.

Corn Belt and Plains States; they also accounted for over three-quarters of all agricultural bank closures.

As with other indicators of bank stress, bank closure patterns show how problems induced by contractions in energy, real estate, manufacturing, and related markets are beginning to overwhelm problems caused by the farm sector. For the first three quarters of 1986, 50 percent of all closures were in the five-State energy bank region. Almost 75 percent of third-quarter bank closures were in the 14 States that are net energy exporters, up from 58 percent of second-quarter closures. Despite the overall conditions of farm banks in the stressed energy bank region, about 46 percent of all farm bank closures observed during the first three quarters of 1986 were in these 5 States.

Although most agricultural banks declared insolvent and closed are relatively small and reopen under new management, bank closures can hurt local credit availability. Debtors with troubled loans held by closed banks are probably hurt the most. No bank, including the acquiring bank, will freely buy such loans;

the FDIC is often left to administer them. The FDIC tends to be strict with problem debtors since its legal responsibilities are to the closed banks' depositors, bondholders, and stockholders. Though November 15, \$646 million of agricultural loans were held by banks that closed in 1986.

Marginally qualified borrowers in a community where a bank has just closed may also find it difficult to secure credit if the community has few other lending institutions. While replacing closed banks with healthy banks is beneficial, many of these banks appear to be more risk-averse than the closed institutions, and may make fewer local loans. Moreover, when a local bank is closed, the remaining banks may extend less credit, so that their liquidity positions are improved.

Farm Credit System

In early 1986 the FCS announced a loss of \$2.3 billion for 1985, the first loss since the System was constituted in its present form during the Depression. Through the first three quarters of 1986 further losses of \$1.53 billion were reported (table 28). In conjunction with

Table 28.--Farm Credit System combined financial data, fourth quarter 1985 through third quarter 1986

Item	Dec. 31 1985	Mar. 31 1986	June. 30 1986	Sep. 30 1986
Statement of Condition Data				
	Million dollars			
Performing loans	64,482	62,129	57,411	53,865
Nonaccrual loans	5,323	5,936	7,588	7,969
Gross loans outstanding	69,805	68,065	64,999	61,834
Allowance for loan losses	(3,190)	(3,180)	(3,463)	(3,656)
Net loans	66,615	64,885	61,536	58,178
Investment and cash	8,329	7,226	6,956	9,269
Interest receivable	3,070	2,134	2,224	2,506
Other property owned	928	983	1,018	1,099
Other assets	891	911	991	805
Total assets	79,833	76,139	72,725	71,857
Bonds outstanding	58,264	55,595	53,360	51,759
Notes outstanding	10,587	10,407	10,431	11,728
Other liabilities	2,612	2,219	1,930	2,090
Total liabilities	71,463	68,221	65,721	65,577
Capital stock	4,969	4,744	4,588	4,427
Surplus	3,401	3,174	2,417	1,853
Total capital & liabilities	79,833	76,139	72,725	71,857
Statement of operations data 1/				
Total interest earned	2,476	2,011	1,835	1,678
Total interest paid	2,283	1,741	1,647	1,539
Net interest income	193	270	187	139
Provision for loan losses	2,112	267	715	459
Net other expense	381	209	233	240
Net income (loss)	(2,300)	(206)	(762)	(560)

1/ Statement of operations data are for the 3 months preceding the dates noted above in the heading.

Source: Quarterly Reports to Investors from the Federal Farm Credit Banks Funding Corporation.

these losses on the income statement, there has been a weakening of the balance sheet. Between December 31, 1985, and September 30, 1986, performing loan volume decreased from \$64.5 billion to \$53.9 billion. At the same time nonaccrual loans increased by almost 50 percent to \$7.97 billion.

The erosion in volume and quality of the System's loan base was accompanied by increases in the allowance for loan losses reflecting expectations of further problems. The capital stock of the System declined with the drop in loan volume while the losses on the income statement led to continued depletion of System surplus. Surplus in the context refers to the earned net worth of the System. Acquired property has started to rise significantly over historic levels reflecting the completion of foreclosure processes initiated

against the first group of farmers in financial difficulty (table 29).

The highest levels and greatest increases in acquired property have occurred in districts serving the central part of the country. On September 30 the FCS held roughly \$1.1 billion in acquired property. Property holdings are clearly concentrated in the land banks, although Production Credit Associations (PCA's) in Texas and the Southeast have relatively high levels of acquired property relative to their loan volume (table 29). Banks for Cooperatives (BC's) with the exception of Omaha, St. Paul, and Texas districts, have relatively low levels of acquired property.

The losses over the last year have affected components of the FCS to differing degrees. While all System banks are

Table 29.--Farm Credit System acquired property by quarter, June 30, 1985 through June 30, 1986

Lending unit	District												FCS totals
	Springfield	Baltimore	Columbia	Louisville	Jackson	St. Louis	St. Paul	Omaha	Wichita	Texas	Sacramento	Spokane	
Thousand dollars													
June 30, 1985													
FLB	3,124	3,418	63,636	63,082	132,337	65,972	72,498	60,943	6,556	0	1,676	3,652	476,894
FICB	0	0	289	0	0	582	0	2,053	0	3,575	0	0	6,499
PCA	791	2,606	36,431	44,643	11,318	11,131	46,408	42,079	14,561	8,124	31,044	3,092	252,228
BC	0	0	0	0	0	91	0	0	0	0	0	81	172
Total	3,915	6,024	100,356	107,725	143,655	77,776	118,906	105,075	21,117	11,699	32,720	6,825	735,793
September 30, 1985													
FLB	3,233	6,112	74,523	59,168	181,307	72,263	101,195	84,034	72,616	3,331	67,987	32,212	757,981
FICB	0	0	306	0	51	546	0	2,054	0	3,471	9,064	0	15,492
PCA	1,211	2,998	42,853	41,272	9,472	14,014	52,580	49,792	11,230	14,349	25,579	15,115	280,464
BC	0	0	0	0	0	86	647	542	734	2,359	683	372	5,423
Total	4,444	9,110	117,682	100,439	190,830	86,909	154,422	136,422	84,580	23,510	103,313	47,699	1,059,360
December 31, 1985													
FLB	3,790	6,902	81,606	58,745	187,499	90,870	126,455	102,685	97,256	4,116	90,709	90,194	940,827
FICB	139	144	7,826	425	157	624	701	2,353	264	3,343	10,241	196	26,413
PCA	1,178	2,756	26,864	37,114	6,277	17,635	52,158	50,757	9,516	14,069	23,204	13,750	254,778
BC	85	39	111	167	194	344	1,809	1,976	951	5,289	215	670	11,850
Total	5,192	9,841	116,407	96,451	194,127	109,473	181,123	157,271	107,987	26,817	124,369	104,810	1,233,868
March 31, 1986													
FLB	4,105	7,419	66,835	49,163	172,376	97,598	154,394	111,370	106,327	7,151	141,170	93,244	1,011,152
FICB	134	151	9,408	550	164	895	676	2,900	254	1,660	10,219	126	27,137
PCA	1,119	2,441	22,039	29,600	4,079	17,797	55,080	47,730	10,305	16,095	25,966	10,776	243,027
BC	81	38	107	161	188	330	1,769	1,903	945	3,894	207	659	10,382
Total	5,439	10,049	98,389	79,474	176,807	116,720	211,919	163,903	117,831	28,800	177,562	104,805	1,291,698
June 30, 1986													
FLB	5,847	6,099	46,218	45,983	120,535	82,297	145,388	88,626	92,070	7,693	121,136	67,712	829,604
FICB/													
PCA	1,191	1,615	15,269	18,671	10,890	9,791	40,090	7,617	7,067	20,445	37,276	9,114	179,036
BBC	110	48	136	204	238	398	1,868	1,319	928	2,900	263	651	9,063
Total	7,148	7,762	61,623	64,858	131,663	92,486	187,346	97,562	100,065	31,038	158,675	77,477	1,017,703

Sources: Farm Credit System, Office of Administration, Summary Report of Condition and Performance of the Farm Credit System, Quarters ending June 30, 1985 through March 31, 1986. Farm Credit Corporation of America, Summary Report of Condition and Performance of the Farm Credit System, Quarter ended June 30, 1986.

ultimately jointly liable for the condition of the System, some are experiencing significantly greater difficulties than others. In particular, the land banks serving the central United States (Jackson, Louisville, Omaha, St. Louis, St. Paul, and Wichita districts) have little or no surplus. In addition, several Federal Intermediate Credit Banks (FICB's) (Omaha, Spokane, Wichita) are in a similar condition. At the association level there is greater diversity; some associations in troubled districts are doing well while others in generally sound districts are doing poorly. As losses continue to mount, more components of the System will face difficulty, due to internal losses or transfers of surplus from their accounts to weaker banks.

The need to activate the loss sharing agreements in June 1986 and the assessments by the Farm Credit Capital Corporation have proven controversial. A number of FCS

institutions have challenged the assessment process in court, causing some delay in moving System resources to institutions that need assistance. Events beyond the System's control have also contributed to losses in 1986. Most importantly, large commodity overhang and uncertainties about continued large Government payments have contributed to the continued decline in land values, which in turn results in high provisions for losses for the FCS. Similarly, last summer's drought and the collapse of the oil economy have led to greater nonaccruals and reduced loan demand in the Southeast and Southwest.

The FCS is also faced with a significant volume of high-cost debt in the form of high coupon bonds issued 3 to 5 years ago when interest rates were high. Because these bonds are not callable, they keep the System's average cost of funds high. On September 30, 1986, the FCS had roughly \$30 billion (of \$63.5

billion of total debt outstanding) of outstanding bonds bearing a coupon rate in excess of 10 percent. A high average cost of funds limits the FCS's ability to lower its loan rates to borrowers to levels comparable to those charged by competitors and maintain a positive interest margin.

As the reserves of the System are depleted and the volume of performing loans declines, the ability of the FCS to absorb additional losses is greatly diminished. Total loan volume is down in all districts of the System with the largest year-to-year declines having occurred in the Columbia, Omaha, St. Louis, St. Paul, and Wichita districts (table 30). In these districts, PCA's appear to have had a relatively larger drop in volume than land banks or banks for cooperatives. This probably reflects the greater degree of competition among financial institutions for short- and medium-term credit.

Performing loan volume has declined by a greater amount than total volume, reflecting increased volume of nonaccrual and high risk loans. Nonaccrual loans represent the next round of acquired property and losses for the System once they are worked through the foreclosure process. High-risk loans can be thought of as loans one step removed from becoming nonaccrual. Thus, these two categories provide an indication of potential losses from the System's current portfolio. On June 30, 1985, nonaccrual and high-risk loans totaled roughly \$8 billion out of a total loan portfolio of \$76.5 billion. On June 30, 1986, the corresponding amounts were \$12.3 billion on a total volume of \$65 billion. Thus, roughly one-fifth of the portfolio may be considered at risk.

The relationship between amounts of high-risk and nonaccrual loans varies considerably by district. By June 30, 1986, it

Table 30.—Farm Credit System loan performance status by quarter, June 30, 1985 through June 30, 1986

Loan status by lending unit	District												FCS totals
	Springfield	Baltimore	Columbia	Louisville	Jacksonville	St. Louis	St. Paul	Omaha	Wichita	Texas	Sacramento	Spokane	
Million dollars													
June 30, 1985													
Performing	1,769.4	2,769.3	6,556.1	6,026.9	3,300.2	570.6	10,126.9	6,632.9	5,640.5	3,782.0	6,965.4	4,273.0	64,223.7
Restructured	0	2.6	2.5	5.1	14.3	0.1	39.6	2.5	2.2	11.1	25.5	11.0	116.5
Other high risk	34.2	135.6	477.6	360.0	296.3	467.0	870.6	859.3	535.8	138.9	676.8	405.1	5,257.2
Non-accrual	16.0	83.6	273.7	219.6	169.7	333.0	656.7	542.0	420.8	85.1	500.8	240.2	3,541.2
Total	1,837.8	3,043.1	7,513.8	6,752.0	3,907.1	6,640.1	11,693.8	8,036.7	6,599.3	4,017.1	8,168.5	4,929.3	73,133.6
September 30, 1985													
Performing	1,764.0	2,822.3	6,518.3	5,321.3	3,320.0	5,541.2	9,695.9	6,020.0	5,302.7	3,813.7	6,679.5	4,356.3	61,155.2
Restructured	0	2.9	3.4	2.7	11.8	0.1	36.4	2.9	4.4	14.8	51.4	0.1	130.9
Other high risk	38.8	130.6	388.2	306.3	248.0	474.1	654.5	516.5	497.6	112.9	821.0	365.7	4,554.0
Non-accrual	15.1	40.8	234.8	659.8	108.9	408.6	820.8	846.2	533.0	29.3	371.2	203.5	4,272.0
Total	1,817.9	2,996.6	7,144.7	6,290.1	3,688.7	6,424.0	11,207.6	7,385.4	6,337.7	3,970.7	7,923.1	4,925.6	70,112.1
December 31, 1985													
Performing	1,714.2	2,723.0	6,155.3	4,843.1	2,944.7	4,778.9	8,466.4	5,204.2	4,798.2	3,784.8	9,995.4	3,877.5	59,243.7
Restructured	0.1	2.3	3.5	2.6	9.8	0.6	42.3	8.6	1.7	15.5	55.6	1.0	143.6
Other high risk	45.2	120.9	317.6	282.7	258.4	586.1	1,007.1	624.5	609.6	125.9	561.6	320.0	4,859.6
Non-accrual	13.7	43.4	319.8	573.4	169.6	508.9	1,001.4	986.2	606.2	25.2	394.9	412.9	5,055.6
Total	1,773.2	2,889.6	6,796.2	5,701.8	3,382.5	5,874.5	10,517.2	6,823.5	6,015.7	3,951.4	10,965.5	4,611.4	69,302.5

30.—Farm Credit System loan performance status by quarter, June 30, 1985 through June 30, 1986 —continued

March 31, 1986													
Performing	2,042.6	3,276.3	6,890.1	5,250.3	2,940.8	4,963.8	9,603.5	5,263.8	5,037.1	4,599.7	8,046.8	4,026.8	61,941.6
Restructured	0.1	2.1	2.3	2.0	4.0	0.3	18.9	9.3	3.4	10.8	57.2	0.2	110.6
Other high risk	59.9	130.0	315.5	2.3	319.7	424.2	930.3	678.9	556.7	79.2	752.4	266.1	4,515.2
Non-accrual	16.9	43.7	376.5	718.5	278.5	615.8	1,074.9	869.1	625.3	74.6	490.9	508.5	5,693.2
Total	2,119.5	3,452.1	7,584.4	5,973.1	3,543.0	6,004.1	11,627.6	6,821.1	6,222.5	4,764.3	9,347.3	4,801.6	72,260.6
June 30, 1986													
Performing	1,554.9	2,645.4	5,300.5	3,921.7	2,549.9	4,314.0	7,199.2	4,244.7	4,217.0	3,593.0	5,937.6	2,949.4	48,327.2
Restructured	0.1	10.4	1.4	22.3	7.5	0.3	115.0	14.9	1.9	11.3	56.0	0.3	241.4
Other high risk	39.5	109.0	292.3	207.1	206.7	445.9	1,290.2	539.3	480.5	69.9	756.7	597.6	5,034.6
Non-accrual	33.6	59.0	611.3	955.2	430.3	669.0	1,307.5	1,258.3	800.9	147.6	592.6	714.6	7,579.9
Total	1,628.1	2,823.8	6,205.5	5,106.3	3,194.3	5,429.1	9,911.9	5,957.1	5,500.3	3,821.8	7,342.9	4,261.8	61,183.1

Sources: Farm Credit System, Office of Administration, Summary Report of Condition and Performance of the Farm Credit System, Quarters ending June 30, 1985 through June 30, 1986. Farm Credit Corporation of America, Summary Report of Condition and Performance of the Farm Credit System, Quarter ended June 30, 1986.

appeared that districts such as Columbia, Louisville, Omaha, and Wichita had worked most of their problem loans through to nonaccrual status, since the ratio of high risks to nonaccruals had declined significantly. In contrast, Sacramento, St. Paul, and Spokane appear to face another round of nonaccrual problems due to the relatively large ratio of high risks to nonaccruals.

A noticeable feature of table 30 is the relatively limited use of restructuring by the FCS. The only districts having a significantly increased volume of restructured loans in the June 30, 1985 to June 30, 1986 periods were Baltimore, Louisville, Sacramento, and St. Paul. In Louisville's case, restructuring was primarily through PCA's, in Baltimore and St. Paul the FLB's were primarily responsible, and in Sacramento the Bank for Cooperatives. In other districts where restructuring increased, it tended to be through PCAs. Restructured loans continue to represent a minor part of the loan portfolio in all districts.

Delays in the foreclosure and collection process cause lags between the time when loans enter nonaccrual status and when actual losses are charged off. Table 31 provides evidence of this phenomenon. During June 1985- June 1986, charge-offs increased in all districts except Sacramento and Spokane. The

most troubled districts experienced the most noticeable increase. For example, in Louisville charge-offs increased from \$6.8 million to \$63.7 million and in St. Paul from \$38.6 million to \$102.4 million. For the most part the increased charge-offs came from land banks, while PCA's and BC's either had constant or declining charge-offs.

Farmers Home Administration

For nearly 50 years the Farmers Home Administration and its predecessor agencies have been the lender of last resort in agriculture. In this role, FmHA farmer loan programs have facilitated the entry of new farmers into the sector, assisted farmers adversely affected by economic or natural disaster, and helped farmers with limited resources attain a more economical farm size.

During the 1980's, FmHA has been a very active lender, issuing at least \$3.0 billion in new debt each year. In fiscal 1986 total obligations were \$4.4 billion. During the late 1970's and early 1980's, FmHA made a large volume of loans under the Economic Emergency and Emergency Disaster programs. In the past 3 years most of the agency's lending has shifted to the Operating Loan program. In addition, FmHA is changing its emphasis from direct to guaranteed

Table 31.--Farm Credit System net loan charge-offs by quarter, June 30, 1985 through June 30, 1986

Lending unit	District												FCS totals
	Springfield	Baltimore	Columbia	Louisville	Jackson	St. Louis	St. Paul	Omaha	Wichita	Texas	Sacramento	Spokane	
Million dollars													
June 30, 1985													
FLB	1/	0.4	0.9	(4.5)	13.6	11.3	11.3	33.8	16.1	0.3	14.4	0.7	98.3
FLBA	0.0	0.0	0.4	1.8	0.0	1/	3.7	0.0	0.0	0.0	0.0	0.0	5.9
FICB	0.0	0.1	4.1	0.0	0.0	0.2	0.5	5.0	0.0	1/	8.0	2.8	20.7
PCA	0.1	1.2	17.8	9.5	4.7	11.1	28.1	26.2	3.5	0.3	12.5	10.6	120.6
BC	0.0	0.0	0.0	0.0	0.0	1/	1/	0.2	1/	(0.1)	0.0	1/	0.1
Total	0.1	1.7	23.2	6.8	18.3	22.6	38.6	65.2	19.6	0.5	34.9	14.1	245.6
September 30, 1985													
FLB	1/	0.9	4.7	22.0	8.4	30.0	11.8	34.7	19.1	(0.3)	9.3	(0.3)	140.3
FICB	0.0	0.0	0.9	0.0	1/	1/	0.0	0.4	0.0	1/	0.0	0.0	1.3
PCA	0.4	0.8	7.2	24.6	9.8	2.4	25.8	105.9	15.3	1.1	12.5	0.2	206.0
BC	0.0	0.0	2.0	0.0	0.1	(0.5)	0.1	1.2	1/	0.1	3.0	0.1	6.1
Total	0.4	1.7	14.8	46.6	18.3	31.9	37.7	142.2	34.4	0.9	24.8	0.0	353.7
December 31, 1985													
FLB	2/	0.9	9.0	27.4	22.0	(7.3)	45.3	56.0	23.6	1/	(8.4)	12.4	180.9
FLBA	0.0	2.1	7.6	0.0	0.0	0.0	34.5	0.0	0.0	0.1	0.0	0.1	44.4
FICB	1/	1/	4.7	2/	1/	0.1	3.0	5.0	1/	1/	0.1	2.4	15.3
PCA	2.3	2.2	9.9	11.0	(0.4)	(4.7)	46.9	16.6	3.9	3.1	33.6	13.0	137.4
BC	1/	1/	0.0	1/	2/	0.5	0.3	1.1	1/	0.4	1/	1/	2.3
Total	2.3	5.2	31.2	38.4	21.6	-11.4	130.0	78.7	27.5	3.6	25.3	27.9	380.3
March 31, 1986													
FLB	1/	0.2	9.6	10.9	27.8	17.5	3.5	63.1	29.8	1.4	12.2	1.8	177.8
FLBA	0.0	0.0	0.0	2.7	0.0	0.0	0.9	0.0	0.0	1.6	0.0	0.1	5.3
FICB	1/	1/	4.1	0.0	1/	0.2	0.0	0.0	0.1	2/	8.5	1.4	14.3
PCA	0.5	1.0	8.0	2.3	(1.8)	0.5	1.1	61.6	5.8	2.2	4.9	(1.3)	84.8
BC	1/	1/	0.0	1/	1/	1/	2/	1.2	1/	2/	0.0	0.1	1.3
Total	0.5	1.2	21.7	15.9	26.0	18.2	5.5	125.9	35.7	5.2	25.6	2.1	283.5
June 30, 1986													
FLB/													
FLBA	0.1	1.9	17.9	37.0	32.4	18.1	59.8	83.6	83.4	0.2	12.4	4.8	351.6
FICB/													
PCA	0.2	0.9	14.8	26.6	4.0	5.5	42.6	8.9	17.4	11.8	7.4	3.6	143.7
BC	1/	1/	(0.6)	1/	1/	1/	1/	(0.1)	0.3	1/	(0.1)	1/	-0.5
Total	0.3	2.8	32.1	63.6	36.4	23.6	102.4	92.4	101.1	12.0	19.7	8.4	494.8

1/ Less than a \$50,000 charge-off. 2/ Recovery of less than \$50,000.

Sources: Farm Credit System, Office of Administration, Summary Report of Condition and Performance of the Farm Credit System, Quarters ending June 30, 1985 through March 31, 1986. Farm Credit System of America, Summary Report of Condition and Performance of the Farm Credit System, Quarter ended June 30, 1986.

lending. The guarantee program (which guarantees up to 90 percent of the value of loans made by private lenders) has grown from 10 percent of annual obligations in 1984 to 36 percent in 1986.

Given the nature of its borrowers, FmHA is expected to have a portfolio dominated by relatively high-risk loans. For example, to be eligible for a loan, a borrower must first be refused by two private sector lenders. Since FmHA is the lender of last resort and its portfolio is risky, the agency's performance is expected to deteriorate earlier and further than other agricultural lenders (table 32). During this decade, the percentage of delinquent loans has more than doubled. While this percentage has grown very little in recent years, it has remained at more than one-third

of the loans in the portfolio 4 years in succession. In 1986, for the first time in this decade, the year-to-year change in the number of loans and the number of delinquent loans fell.

The increase in the amount of principal classified as delinquent in the 1980's has been even more impressive than the increase in the number of delinquent loans. Debt classified as delinquent in June 1986 was more than eight times greater than in June 1980 and accounted for nearly one-fourth of the entire portfolio. While FmHA has a more stringent definition of delinquency (if \$10 or more is more than 15 days past due) than other major lenders, the difference accounts for relatively little of the observed growth. More than \$4 billion of the \$6.3 billion classified as delinquent on June 30,

Table 32. -Farmers Home Administration farmer program delinquencies,
June 30, 1980 to June 30, 1986

Date 2/	Number of active cases 1/ (caseload)			Principal outstanding		
	Delinquent			Delinquent		
	Total	Total	Proportion	Total	Amount	Share of total
	-- Number --		Pct.	-- Mil. dollars --		Pct.
1980	372,046	62,200	16.7	18,192.4	827.6	4.6
1981	423,134	84,955	20.1	22,905.4	1,592.9	7.0
1982	434,460	120,166	27.7	24,137.4	2,933.6	12.2
1983	436,611	146,251	33.5	24,410.2	4,131.8	16.9
1984	446,855	158,237	35.4	25,369.0	5,397.5	21.3
1985	455,561	165,344	36.3	27,786.3	6,384.8	23.0
1986	429,146	157,391	36.7	27,834.6	6,835.2	24.6

1/ Duplicated cases because some borrowers have loans under several different programs. The number of cases is the number of loans, not the number of borrowers. 2/ June 30 of year shown. To account for the annual cyclical trend in delinquencies, midyear data are presented.

Source: Farmers Home Administration, 616 report, various issues.

1986, was more than 3 years past due. Delinquencies in June 1986 would have been even greater if FmHA had not charged off nearly a quarter of a billion dollars in principal and interest during the 12 months ending in March 1986.

Relative to a year earlier, the number of loans at FmHA declined, while the amount of principal outstanding increased (table 32). These divergent trends reflect, in large part, the massive amount of loan rescheduling, consolidation, or reamortization that FmHA has undertaken during the past 2 fiscal years. In fiscal years 1985 and 1986, FmHA rewrote loans for 120,098 and 43,034 borrowers, respectively.

Both in terms of case numbers and dollar totals, the Farm Ownership, Operating, Emergency Disaster, and Economic Emergency loan programs (noted with asterisks in table 33) are the most significant farmer loan programs at FmHA. These four programs account for 96 percent of the farmer program caseload, 98 percent of principal outstanding, 96 percent of delinquent cases, and 99 percent of delinquent principal. Within this group of four, the Emergency Disaster (ED) program warrants special comment. The ED program was developed to assist farmers affected by a natural disaster, such as drought, flood, hurricane. During the late 1970's and early

1980's the program expanded rapidly, particularly in the southern United States. Currently, more than 40 percent of the principal outstanding and nearly 40 percent of the loans are classified as delinquent. Compounding this already serious problem is the age of delinquencies in the ED program. Of the \$3.8 billion classified as delinquent, \$3.3 billion are more than 3 years past due.

Delinquencies at FmHA are not yet abating. The amount classified as delinquent on September 30, 1986, is larger in virtually every program (Youth Operating Loans and Economic Opportunity Loans being the sole exceptions) than a year earlier. If the Economic Opportunity program is excluded (since it has been inactive for many years and virtually the entire portfolio has been delinquent for the past 3 years), delinquencies in the farmer programs increased an average of 7 percent during fiscal 1986. Of the four major programs, Operating Loans registered the largest percentage increase in delinquencies (24 percent). Given the rapid expansion of the Operating Loan portfolio during the past 3 fiscal years, the jump in delinquencies is ominous.

Despite the continued high level of delinquencies at FmHA, very few FmHA borrowers are being forced off their farms. During fiscal year 1986, 1.9 percent of all

Table 33.--Farmers Home Administration farmer program delinquencies
by program, September 30, 1986

Farmer programs (Individual loans)	Number of active cases 1/ (caseload)			Principal outstanding		
	Delinquent			Delinquent		
	Total	Total	Proportion	Total	Amount	Share of total
	---Number---		Percent	--Mil. dollars--		Percent
*Farm ownership (FO)	123,170	27,275	22.1	7,647.0	391.8	5.1
Farm ownership -- nonfarm enterprises	1,281	324	25.3	50.3	4.1	8.2
*Operating loans -- excluding youth (OL)	118,665	36,800	31.0	6,335.7	1,016.0	16.0
Operating loans -- youth	1,257	442	35.2	3.9	1.6	41.0
*Emergency dis- aster (ED)	113,002	43,534	38.5	9,373.4	3,798.0	40.5
*Economic emer- gency (EE)	48,172	21,612	44.9	3,860.1	1,026.9	26.6
Recreation	193	50	25.9	12.1	1.3	10.7
Soil and water	15,661	4,295	27.4	293.1	36.5	12.5
Economic opportunity	250	233	93.2	0.3	0.3	93.8
Total	421,651	134,565	31.9	27,575.9	6,276.5	22.8

1/ Duplicated cases because some borrowers have loans under several different programs. The number of cases is the number of loans, not the number of borrowers. On September 30, 1986, there were 274,145 active, farmer program borrowers of whom 79,320 (28.9 percent) were classified as delinquent.

Sources: Farmers Home Administration, Farm and Housing Activity Report for September 30, 1986 and 616 report for September 30, 1986.

FmHA borrowers left the farm sector for financial reasons (table 34). This represents a very slight increase over fiscal year 1985.

Even though relatively few FmHA borrowers are being forced from their farms, the portfolio of acquired property at the agency has increased substantially. In September 1985, FmHA held about 1.0 million acres of farmland worth an estimated \$664 million. By September 1986, the inventory had reached approximately 1.4 million acres worth \$841 million. During fiscal 1986, nearly 1,900 farms were acquired by FmHA and 829 were sold.

Life Insurance Companies

During 1986, serious financial stress increased within the farm mortgage loan portfolios held by life insurance companies.

Historically, farm real estate mortgages have been an important life insurance company investment and a key source of real estate loan funds. Despite the declining role of life insurance farm lending since 1970, life insurance farm mortgage loans remain an important source of funds. Approximately 56,000 farm mortgage loans were outstanding on June 30, 1986. About 75 companies hold approximately 85 percent of all mortgages (farm and nonfarm) held by life insurance companies. The farm real estate loan portfolio is held by fewer than 15 companies, down from approximately 20 in 1980.

Delinquency rates, based on the number of loans delinquent as a percentage of all such loans, were lower for life insurance company farm mortgage loans than for their nonfarm counterparts throughout the 1970's. The farm delinquency rate first exceeded the nonfarm

Table 34.--Farmers Home Administration farmer program borrowers discontinuing farming, fiscal 1985-86

Borrower category	Fiscal 1985		Fiscal 1986	
	Number	Percent	Number	Percent
Active farmer program borrowers:	278,892	100.0	274,145	100.0
Total borrowers who discontinued farming due to financial difficulties:	4,695	1.7	5,317	1.9
Discontinued borrowers who did so:				
Under bankruptcy	811	17.3	1,187	22.3
With FmHA foreclosure	89	1.9	111	2.1
With other foreclosure	703	15.0	850	16.0
With voluntary conveyances to FmHA	1,090	23.2	912	17.2
With transfer and assumption to others	160	3.6	195	3.7
With sales, other than foreclosure	1,833	39.0	2,062	38.8

Source: Farmers Home Administration, Farm and Housing Activity Report, September 30, 1985 and September 30, 1986.

rate in June 1981. It has done so continuously since June 1982, with a rate of 9.08 percent on June 30, 1986, compared with a nonfarm rate of 1.33 percent (table 35). The June 1986 farm mortgage delinquency value is the highest recorded since the American Council of Life Insurance initiated the survey in 1954. There were 5,088 delinquent life insurance company farm mortgage loans on June 30, 1986.

The delinquency rates by amount of loans outstanding are proportionately higher for farm mortgages, because they are larger on average. The farm mortgage rate of delinquency as a percent of outstanding loans has exceeded the nonfarm rate continuously since June 1978. It rose to 19.85 percent by June 1986, also a record high for the series, and only the fourth time the series has been in double digits (table 35). The nonfarm mortgage delinquency rate in terms of dollar value increased to 1.91 percent in June 1986. Farm delinquency rates typically fall from June to December due to seasonal factors; thus it remains unclear whether the rates have peaked. Some \$2.16 billion of life insurance company farm mortgage loans were delinquent on June 30, 1986.

A more restrictive measure of farm lending problems for life insurance companies than delinquencies is loans in the process of foreclosure. Farm mortgage foreclosure rates by number of loans have exceeded nonfarm rates since June 1979, and stood at 3.42 percent in June 1986 (table 36). The farm rate was 3 times larger than 2 years earlier. A total of 1,915 life insurance company farm mortgage loans were in the process of foreclosure on June 30, 1986.

Farm mortgage foreclosure rates by amount of loans outstanding have exceeded nonfarm rates since June 1978 and have reached ever higher levels in the 1980's (table 36). On June 30, 1986, 8.23 percent of the amount outstanding for farm loans was in the process of foreclosure, a series peak. A total of \$893.5 million in life insurance company farm mortgage loans was in the process of foreclosure on June 30, 1986.

The number and dollar amount of farm and nonfarm loans actually foreclosed during 1980-86 are shown in table 37. Farm mortgage foreclosures have risen each year during the 1980's. Beginning in 1982, the dollar amount of farm mortgage loans

Table 35.--Life insurance company mortgage loan delinquencies, 1980-86 1/

End of month	Rates by number of loans		Rates by amount		Number of companies 2/
	Nonfarm	Farm	Nonfarm	Farm	
	mortgages	mortgages	mortgages	mortgages	
	Percent				No.
1980 June	.95	.79	.79	2.82	77
Dec.	1.06	.54	.89	2.00	76
1981 June	.89	1.02	.73	4.04	77
Dec.	1.11	.77	.69	3.69	78
1982 June	1.03	1.70	.87	6.45	78
Dec.	1.07	1.66	.83	6.40	77
1983 June	1.04	2.99	1.04	9.82	75
Dec.	1.10	2.63	.90	8.27	75
1984 June	1.17	3.88	.93	10.38	75
Dec.	1.24	3.78	.90	9.58	76
1985 June	1.15	6.26	1.02	14.89	74
Dec.	1.43	6.34	1.16	15.06	74
1986 June	1.33	9.08	1.91	19.85	74

1/ Delinquent loans (including loans in the process of foreclosure). Delinquent loan is a nonfarm mortgage with interest payments in arrears at least two months (60 days if other than a monthly pay) or a farm loan with interest in arrears more than 90 days. 2/ Number of companies reporting. Reporting companies account for 80-84 percent of the mortgages held by U.S. life insurance companies depending on the date of the survey.

Source: American Council of Life Insurance, Investment Bulletin, various issues.

Table 36.--Life insurance company mortgage loans in the process of foreclosure, 1980-86

End of month	Rates by number of loans		Rates by amount		Number of companies 1/
	Nonfarm	Farm	Nonfarm	Farm	
	mortgages	mortgages	mortgages	mortgages	
	Percent				No.
1980 June	.08	.13	.18	.57	77
Dec.	.09	.17	.17	.72	76
1981 June	.11	.25	.15	1.18	77
Dec.	.12	.28	.23	1.20	78
1982 June	.12	.37	.24	1.63	78
Dec.	.16	.63	.29	2.41	77
1983 June	.18	.87	.29	2.60	75
Dec.	.16	.89	.31	2.60	75
1984 June	.16	1.14	.30	2.97	75
Dec.	.16	1.75	.18	4.54	76
1985 June	.17	2.16	.28	6.00	74
Dec.	.21	2.86	.31	7.11	74
1986 June	.25	3.42	.69	8.23	74

1/ Number of companies reporting. Reporting companies account for 80-84 percent of the mortgages held by U.S. life insurance companies depending on the date of the survey.

Source: American Council of Life Insurance, Investment Bulletin, various issues.

Table 37.--Life insurance company mortgage loans foreclosed, 1980-86 1/

Year	Nonfarm mortgages		Farm mortgages	
	Number	Thou. dollars	Number	Thou. dollars
1980	549	63,237	26	18,160
1981	552	58,491	47	55,741
1982	760	131,392	167	170,310
1983	868	114,993	306	347,002
1984	1,024	242,428	475	289,251
1985	1,033	328,558	1,000	530,235
1986 2/	701	395,903	626	304,512

1/ Loans foreclosed include those for which title to the property or entitling certificate was acquired during the period shown; loans assumed by, or awaiting transfer to, the FHA or VA; delinquent cases resulting in loss of title to the mortgagor; and loans subject to redemption. 2/ January 1 through June 30 period.

Source: American Council of Life Insurance, *Investment Bulletin*, various issues.

foreclosed exceeded that for nonfarm mortgages in each year until the first half of 1986. Completed farm foreclosures during all of 1985 totaled \$530.2 million; during the first half of 1986 they were \$304.5 million.

Recent Credit Policy Developments

Farm lenders have developed numerous special credit policies to cope with the financial stress on many of their borrowers. In addition, a number of Federal and State policies and programs have been developed to alleviate farm lender and farmer financial stress. Whether initiated by the public or private sector or directed narrowly at one particular type of farm lending institution or special category of financially troubled farmers, the impacts of special policies and programs typically are much broader with effects distributed among the various types of lenders. This results from their many competitive and cooperative linkages. Because many farm borrowers use multiple lending sources, a policy or program that helps one type of lender usually helps other types as well. Examples are programs that strengthen FmHA, thus helping other lenders with their troubled farm borrowers or an interest rate adjustment by one type of private lender that may keep a number of its weaker borrowers from seeking new loans from other lenders or being forced to go to FmHA.

Commercial Banks

Policies that assist agricultural commercial banks, their local lending markets, and their farmer borrowers can be divided into two groups. The first group includes policies designed to help banks that were hit hard with loan losses resulting from depressed economic conditions avoid insolvency. Policies designed to reduce the adjustment costs associated with banks that must be declared insolvent and closed are in the second group.

In March 1986, Federal commercial bank regulators implemented a three-part policy initiative to assist banks experiencing heavy losses due to adverse developments in the farm and energy sectors. The first part encourages banks to renegotiate problem loans on terms more favorable to their troubled borrowers. It relies on a change in bank accounting practices whereby the term of a loan may be extended, and interest and principal payments reduced, provided that the entire original principal amount is scheduled to be repaid. Any loss on the loan is thus accounted for as foregone interest income, so that the bank's net income is lower than expected. But loan losses need not be recorded nor charged off against bank capital, provided there is a reasonable prospect for repayment. In many cases, this new accounting practice can be combined with FmHA's interest rate buydown program, benefiting both banks and farmers.

The second part of the regulators' initiative reinforces the incentive for bankers to work with their cash-strapped borrowers by changing the way renegotiated debt is reported. Through March 31, 1986, renegotiated debt was counted as nonperforming, making banks reluctant to restructure problem loans. Now restructured loans are reported as being renegotiated, but performing according to the modified terms.

There is some evidence that agricultural banks have responded to this policy change. By June 30, approximately \$2.7 billion in loans at almost 5,000 commercial banks had been reported as renegotiated and performing according to modified terms. About \$400 million of these were agricultural loans, and roughly 1,000 agricultural banks reported some renegotiations. While not strictly comparable, June data on loan renegotiations over the past 4 years indicate that farm banks' level of restructurings was higher in 1986 than earlier periods and above that of other small banks (table 38).

Capital forbearance, the third part of the regulators' initiative, allows banks that apply and are approved to operate with substandard capital ratios. To qualify, a bank must have 25 percent of its loans to the farm and/or energy sectors, show good management, submit a plan to meet capital requirements over the next 5 years (or by 1993, whichever comes first), file annual progress reports, and show a reasonable prospect for returning to profitability. Banks have until 1988 to apply for the program. In Congressional testimony, regulators stated that a 4.0-percent primary capital ratio represented a reasonable lower bound for eligibility.

Applications for the capital forbearance program were high through the first three quarters of 1986 (table 38), relative to the estimated target group of banks. As of September 30, 128 banks had applied for forbearance: 31 were approved, 23 denied, and the remainder are pending or withdrew their applications, presumably upon closure. Almost all approved banks are in areas dominated by agricultural and energy lenders, probably in the stressed energy bank region. According to June 1986 call report data, 196 banks had primary capital ratios between 4.0 and 5.5 percent, 53 also had farm loans

exceeding one-fourth of total loans. While the program may benefit targeted banks, they represent a minority of all severely stressed institutions as indicated by the number of vulnerable banks (table 25).

Other policies assist farm banks under stress. To ensure adequate liquidity at small and medium-sized agricultural banks experiencing especially strong local loan demands, the FRB renewed its temporary simplified lending program in time for the 1986 planting season. It also modified the program's requirements, making it potentially more accessible to these banks. It is an alternative to the FRB's regular seasonal lending program, which was liberalized in 1985.

Under the regular seasonal program, loans are made by FRS District Banks at discount window rates to commercial banks needing increased liquidity to meet seasonal needs for funds. In 1985, to enhance the usefulness of this program by small and medium-sized banks, especially those that are agricultural in nature, the FRB increased the proportion of the seasonal loan demand surge which may be covered by a FRS loan. This program is not, however, limited to agricultural banks or banks with farm loans outstanding.

Available only to agricultural (FRB definition) banks that might not qualify for the regular seasonal loan program, the temporary simplified program was designed to meet these banks' liquidity needs arising from unusual local loan demands. The liquidity shortfall need not have arisen from seasonal factors for a bank to qualify. Like the regular seasonal program, loans through this simplified program are made at discount window rates to qualifying banks. While qualifying institutions may use either program, they cannot use both simultaneously. The simplified program was instituted in March 1985 and renewed in February 1986. On a broader level, access to the discount window continues to be emphasized by the FRB for all banks experiencing liquidity problems related to agricultural credit developments.

In 1985, use of the regular seasonal program peaked at \$207 million in August; 564 banks used the program during the year. The temporary simplified program's loan volume peaked at \$14 million for 1985 with only 14

Table 38.--Response to the 1986 bank regulator policy initiative

Type of bank	Renegotiated loans as a share of total loans 1/			
	Year ending			
	June 1983	June 1984	June 1985	June 1986
	Percent			
Agricultural banks	0.2	0.2	0.3	0.6
Nonag small banks	0.2	0.2	0.1	0.2

Status of capital forbearance program on September 30, 1986 2/

Number of banks:

Applying	128
Approved	31
Pending	67
Denied	23
Withdrew applications	7

1/ Prior to June 30, 1986, loans restructured in favor of the borrower, reflecting a deterioration in financial condition, were reported by banks as renegotiated "troubled" debt, and included in delinquent debt data. Beginning with the June 30, 1986, call report, such loans were reported as "renegotiated loans, performing according to modified terms" and excluded from delinquent debt data. 2/ National and State nonmember banks as of September 30, 1986; State member bank participation as of October 30, 1986, but believed to be unchanged during October.

Source: Renegotiated loan data computed from the Report of Income and Report of Condition files, Board of Governors of the Federal Reserve System. Information on capital forbearance program participation from the Federal Deposit Insurance Corporation for State nonmember banks, the Board of Governors of the Federal Reserve System for State member banks and the Office of the Comptroller of the Currency for national banks.

banks participating. Program use was even lighter in 1986 with loans through the regular seasonal program reaching a high of \$137 million in August. Loans through the temporary simplified program peaked at \$7 million in October. Over the year, eight banks made inquiries regarding eligibility for the simplified program, four of these actually used it. The relative lack of demand for these discount window loans reflects, in part, increasing liquidity at agricultural banks observed in recent years.

For agricultural banks as a group, improved liquidity resulted from falling loan-deposit ratios. These declining ratios reflect the scarcity of high quality loan applicants now observed in many rural areas. While stress in these areas reduced the volume of new loans, deposits remained somewhat stable as interest accrued to the larger deposits. Agricultural banks now appear to be

net suppliers of funds to national money markets, a situation that has persisted since 1980.

The FRB's simplified program can also be viewed as providing extra liquidity to surviving banks in communities that have experienced bank closures. Banks remaining in such communities may desire increased funds to appear safer or to meet the loan needs of residents and farmers previously served by the failed institutions. While the FRB's accommodative stance toward banks in this situation is publicized by the program, 1986 use suggests the actual need has been light.

Another policy in the second group that helps reduce the adjustment costs of bank closures in rural and farm communities is the result of an agreement by the FDIC and FmHA. Begun in February 1985 and renewed in December 1986, the agreement enables

FmHA to be the production loan guarantor for some of the marginal farm borrowers left without financing due to bank insolvency and closure. Under the terms of the agreement, the FDIC may request an FmHA response when a bank with more than 25 percent of its loans supporting farm activity is closed or about to be closed. FmHA then sends an Emergency Credit Team to the affected community. The team screens production loans outstanding at the closed institution for farmers who might not be able to secure refinancing through other commercial banks, yet are judged by FmHA to be somewhat creditworthy. The team issues production loan guarantees to the FDIC for those loans considered eligible. The FDIC is authorized to sell these guaranteed loans to interested commercial banks.

The agreement's purpose is to protect marginal farm borrowers from foreclosure due to a bank closure during the planting season. No direct cash loans are granted by FmHA. Farmers eligible for direct loans are guided to a regular FmHA loan program. All farmer customers of the closed bank, regardless of qualifications, are given credit counseling by the FmHA team.

In 1985, FmHA sent Emergency Credit Teams to 41 farm banks that were closed and wrote 116 letters of intent to guarantee totaling \$8.7 million. Program activity was down in 1986. Through November, the teams visited 16 closed agricultural banks and wrote 64 letters of intent to guarantee totaling \$4.02 million. The reduced Emergency Credit Team activity in 1986, despite elevated agricultural bank closures, may reflect FDIC's new policy which requires banks that purchase closed banks to assume most marginal loans for at least 90 days.

The FDIC began testing two new policies in 1986 that are also designed to mitigate the problems and costs associated with bank insolvencies. These policies may stem the declines in bank service and credit availability in agricultural areas resulting from bank closures. In part, because banks closed in farm and rural areas have become more difficult to replace with acquiring banks, the FDIC is providing "open bank assistance" to some institutions approaching insolvency. Essentially, the FDIC takes an equity position

in the bank in exchange for removing a portion of its bad assets (loans) and infusing capital. In the first three quarters of 1986, three small, rural, agricultural banks received open bank assistance. As of December, a fourth assistance package was pending stockholder approval.

The second policy tool being tested by the FDIC involves subsidizing the acquisition of a closed bank by a healthy bank. Normally, the FDIC auctions the closed bank to the highest acceptable bidder and collects a premium over the value of the quality assets. Such a premium represents the value of the closed bank's charter. In seriously depressed farm and rural communities, no bidders may be interested at any premium. Instead of liquidating the bank and paying off the depositors directly, the FDIC may now consider paying a subsidy to a healthy bank willing to acquire such a closed institution. First Oklahoma, with a \$130-million farm loan portfolio, was closed and acquired by First Interstate with a "negative bid" subsidy from FDIC. This was the only case of a subsidized acquisition in 1986 through November.

Farm Credit System

The Amendments to the Farm Credit Act of 1985 implemented a major restructuring of the FCS. The first experience with these changes took place in 1986. One of the critical elements was changes in the responsibilities of the Farm Credit Administration (FCA), making it an arms-length regulator with strong supervisory powers. Concern with the weakened financial condition of the FCS and a fear that associations were dissipating their capital led the FCA to restrict any actions by FCS institutions that would lead to lower earnings. This included reduced interest rates for high quality borrowers who had the opportunity to obtain lower cost funds from other lenders. This led to the FCS becoming a relatively high cost lender. As creditworthy borrowers left the System, the FCS argued that borrower flight due to uncompetitive lending costs hurt the viability of the System more than selective lowering of loan rates would.

The steady decline of overall interest rates through 1986 increased the pressure on the FCS to lower rates if it was to hold onto

high quality borrowers. However, given the FCS's high cost bonds, reduction in interest rates to farmers exposed the System to negative margins between interest rates earned and rates paid. Early in the year, the FCS proposed a three-tier interest rate structure that would charge borrowers different rates based upon their credit risk. This program, which would have brought about price discrimination on the basis of risk, represented a major departure from the FCS policy of average cost pricing, with all borrowers being treated as equally as possible.

In October 1986, Congress further amended the FCS legislation by removing FCA's authority to approve System interest rates and by providing temporary relief from generally acceptable accounting principles (GAAP). Removing FCA's interest rate approval authority provides the FCS with the opportunity to set loan rates for customers on a borrower-by-borrower basis, reflecting the System's current cost of funds and the customer's credit status. The accounting changes provide relief through 1988 from having to recognize the entire amount of required loan loss provisions in each quarter and also provide a means for spreading the debt service costs of existing high coupon rate bonds into the future. These two changes can best be thought of in the context of debt rescheduling; they do not reduce the magnitude of the System's debt but they do provide additional time to pay it. Implicit in this latest round of Congressional amendments is the recognition that the changes will be adequate to ensure the System's survival only if conditions in the farm sector improve.

Farmers Home Administration

Probably the three most significant FmHA policy actions taken during fiscal 1986 are: the shift in emphasis from direct to guaranteed lending, the formalization of new procedures for handling delinquent loans, and the interest rate buydown program. The Food Security Act of 1985 authorized \$4.0 billion for FmHA in fiscal 1986. Half was to be in the form of loan guarantees. FmHA actually lent \$4.4 billion, with \$1.6 billion in the form of loan guarantees. Though the agency fell short of intentions, many more guarantees were issued in fiscal 1986 than at any time in the agency's history. The implications of the

shift from direct to guaranteed lending are, ■■ yet, uncertain. Clearly, such a shift reduces the agency's direct role in the distribution of credit in the agricultural sector. It is hoped that guarantees will reduce Federal budgetary exposure in the area of agricultural credit. Whether this hope is realized will depend upon the performance of the agricultural economy and upon the quality of the loans guaranteed by FmHA.

In January 1986, FmHA issued new rules for servicing delinquent and problem loans. The new procedures were issued in response to ■■ restraining order that precluded FmHA from initiating foreclosures pending clarification of borrowers' rights and responsibilities. Under the new rules, ■■ delinquent borrower is sent ■■ letter requesting him to make an appointment with his loan officer within 30 days to discuss available financial alternatives. Furthermore, the borrower's right to appeal an adverse decision is set forth. The development of these new standards reflects the more "businesslike" way in which FmHA is dealing with its borrowers. Additional actions indicative of this new emphasis include the increased number of acceleration letters sent by the agency and its controversial contract with a collection agency to deal with borrowers upon whom the agency had foreclosed.

The Interest Rate Buydown Program (IRBP) was intended to "provide lenders with a tool to enable them to continue to provide credit to operations of not larger than family farms who are temporarily unable to project a positive cash flow on all income and expenses including debt service without a reduction in the interest rate." The IRBP is intended as ■■ last-resort response. To qualify, a loan must meet several requirements. First, if a positive cash flow can be achieved by rescheduling or reamortizing the debt, it will not be eligible. Second, the interest rate reduction must produce ■■ positive cash flow projection. If these conditions are met, FmHA will make payments to the lender of not more than 50 percent of the cost of the interest rate reduction, up to ■■ maximum total interest rate writedown of 4 percentage points. Congress appropriated \$490 million for the 3-year life of the program. Participation during the program's first half-year was very light; only 1,574 loans with total FmHA obligations of

\$9.6 million (out of \$115 million authorized for the program).

Life Insurance Companies

During 1986 life insurance company farm lenders continued to adapt policies in two major areas: (1) handling of problem loan accounts, and (2) management of acquired farm properties. The severity of the problems on these fronts continued to grow and the cumulative farm sector problems of the 1980's have affected the willingness of the life insurance industry to make farm loans. In the 1980's, several companies withdrew from the farm loan market and a number of others reduced their agricultural lending significantly. During 1981-86, life insurance company loans outstanding to the farm sector declined 14.6 percent; they decreased 6.1 percent during 1986 alone.

A number of companies make only a limited number of loans to their existing farm borrowers. Their first priority is on servicing the existing portfolio. In 1986, only five life insurance companies were very active in aggressively pursuing new farm loan business. Companies typically report that loan funds are available for qualified borrowers, but in fact they have moved toward borrowers with larger loan requirements having prime security quality and outstanding management and marketing skills. In short, life insurance companies typically are limiting new farm loans to renewals and increases of good loans and to a small number of very qualified, top-notch new farm borrowers.

The companies have been forced to focus more personnel and resources into developing policies to deal with problem farm loans. They restructured farm loans for those situations warranting it. These policies have taken a variety of forms--capitalization of interest, deferral of interest, deeds in lieu of foreclosure on a portion of the security, reduction of the interest rate in exchange for an arrangement to participate in the operating profits and profits upon sale, or a combination of the above or other plans. Each borrower's situation is unique and must be dealt with on an individual basis.

Life insurance companies now own large amounts of acquired farm properties, which they have had to develop policies and

procedures to manage. As an industry, the companies have tended to hold on to acquired farmland rather than sell it. Insurance companies are a small share of land financing and an even smaller portion of insurance firms' investment portfolios. Thus, they can afford to adopt more of a wait-and-see attitude toward farm sector and farmland value fortunes than can the FLB's where farmland is the primary asset. Moreover, the major insurance firms that were into farm mortgage lending through the 1970's and into the 1980's typically have experienced field staff people who can manage acquired properties, or get them managed by other professionals.

One important policy development is that since October 1985 three life insurance firms have purchased three prominent farm management firms. Other life insurance companies have increased their farm management staffing. These moves have a number of implications. First, the insurance companies are determined not to sacrifice the good farms that they have been forced to acquire. But instead of paying an outside firm to manage the operations, they often do it themselves. The companies see farm management as a viable profit center. Second, with the improved management capacity, future farm loans will likely receive much closer supervision.

Life insurance companies have positioned themselves as participants in the dramatic shifts that have been occurring within the farm management industry. The owners of the management companies have the common goal of earning an economic return from the many farms that they have acquired through foreclosure since land values began declining in the 1980's. The management companies offer a good opportunity for profits and for tax savings. Some analysts have estimated that farm management companies manage about 16 percent of the cultivated acreage and this could increase to 25 percent by 1991 if the growth rate continues.

Current Agricultural Lender Outlook

The financial problems facing farm lenders will continue in 1987. Declining farm asset values have severely decreased the equity cushion that farmers traditionally use as reserve borrowing capacity to see them

through years of unfavorable incomes and inability to fully service their debts. The problem of declining asset values is more serious than the attendant problems of inadequate cash flow to fully service debts, because the latter problem has traditionally been a factor in farm lending, and has not gotten significantly worse in the 1980's. However, with declining asset values, both farmers with significant debt loads and their lenders have become subject to deepening financial stress.

The farm income outlook depends heavily on Government loan, storage, and direct payment programs and the prospects for changes in production expenses. From 1985 through 1987, the drop in production expenses and the increase in Government payments are primary reasons that real net income levels are expected to improve somewhat over the early 1980's even given reduced market receipts.

Analyses that view land values as a function of the returns generated from land, prospects for other longer and intermediate term investments, and real cost of financing, suggest that land values were lower in 1986 and will likely continue to decline, but at a slower rate, in 1987. Available data indicate that farm sector liabilities are either continuing to be repaid or written off. Since the drop in debt will likely be less than the decline in assets, owner equity will continue to contract, which will cause concern for many lenders.

New Chapter 12 bankruptcy provisions and changes in the Uniform Commercial Code (UCC) add to farm lenders' wariness and may make them more cautious in extending credit to farmers in 1987. The new Chapter 12 bankruptcy code designed for family farmers became effective on November 26, 1986. Under the new law, farmers are given the opportunity to reorganize their finances and pay off delinquent debts over a 3- to 5-year period rather than be faced with potential liquidation. Chapter 12 does not allow the creditor to veto the farmer's reorganization plan, have the bankruptcy proceeding dismissed, or have the proceeding converted to a Chapter 7 liquidation. (The latter does not hold if the borrower commits fraud in the bankruptcy plan.)

On December 24, 1986, changes in the UCC altering the special provision known as the "Farm Products Exemption" became Federal law. These changes adopted in the 1985 farm bill included two mechanisms to alert buyers to liens on farm products. First, lenders are required to send notices of liens to any potential buyers of farm products. Second, States are offered the option of developing a USDA- certified central filing system for liens and notification of registered buyers on a regular basis. The crux of the new law is that unless a farm lender is financing farm products produced in one of the few States with a central notice system, the lender will have to prenotify buyers of farm products of the existence of liens to be able to enforce security interest against those buyers.

Commercial Banks

The quality and quantity of agricultural loans held by the commercial banking system are expected to continue declining over the coming year, but probably at decreasing rates. About 150 banks, half of which are agricultural, were expected to be declared insolvent and closed in calendar 1986. At least as many are expected in 1987. The number of problem agricultural banks is anticipated to mount over the coming year as a larger proportion of these banks is overwhelmed by losses accumulated over the past 5 years. But the percentage of all vulnerable, FDIC-designated problem, and closed banks that are agricultural in nature may have peaked in 1985 as a result of accelerating problems at nonagricultural banks, especially those in the southwest and central United States.

A few bright spots are evident, however, if farm income continues to be protected by Federal supports. The rate at which farm loan delinquencies have been growing is down, suggesting that commercial banks may be near the midpoint in working through their overextended farm debtors. Provisions for loan losses and capital continue to rise at agricultural banks, improving their abilities to withstand future losses.

Despite serious problems at agricultural banks, the farm financial crisis taken in isolation will have only limited effects on the commercial banking system. Agricultural

loans and bank holdings of FCS securities combined amount to only 3 or 4 percent of the banking system's total assets. Although the chance of farm loan losses setting off a run at agricultural and rural banks is small, they could trigger more serious systemic instabilities when combined with worsening conditions in the international bank debt situation, the savings and loan industry, the FCS, and banks involved in the energy, commercial real estate, and export-sensitive sectors. Other things being equal, however, the institutional safeguards currently in place to protect the financial system should be sufficient to limit the effects of any currently foreseeable bank problems associated with farm loan liquidations.

Continuing farm loan difficulties will adversely affect the banking system serving several States and regions. The majority of bank lending in Iowa, Nebraska, and North Dakota is by agricultural banks. And farm banks in these and other States in the Plains and Corn Belt regions are suffering the highest incidences of loan delinquencies and closures. Negative developments in the energy and other sectors in the Southern Plains especially are exacerbating farm loan repayment problems and dampening bank performance. While farm banks in the area dominated by lenders to energy compare favorably with farm banks nationally, problems in the region will probably reduce new credit available for any use, including farming.

While difficulties in some regions will restrict farm credit, another emerging problem may lead to credit misallocation of a different nature. Despite the high annual bank closure rate, there are, in all likelihood, a number of insolvent banks that continue to operate because of the inability or unwillingness of the regulatory agencies to shut down all banks as they become insolvent. Approximately 45 percent of the 1,400 or so banks on the FDIC problem list have not had an on-site examination in the past year because the FDIC has been unable to increase its examination force rapidly. While bank closures may restrict credit in some local markets, allowing banks with little or no equity capital to remain open may result in suboptimal lending patterns, inefficient resource allocation, and higher costs to the deposit insurance fund (and taxpayers) in the long run.

On a national level, commercial bank funds available for agriculture will likely remain adequate, due mainly to historically low loan-deposit ratios and weak loan demand by farmers. Commercial bank-held farm debt is expected to contract along with total farm debt, while the banks will continue to increase their relative share of real estate-secured debt in exchange for crop-secured (production) debt.

Farm Credit System

Several issues will be critical for the FCS and its borrowers in the coming year. Most important will be the System's ability to stem the decline in performing loan volume and to recover its funds from nonperforming loans. The System depends heavily on recovery or at least a stabilization of conditions in the farm sector for this to occur. If earnings continue to fall and the quality of the System's portfolio continues to deteriorate, the FCS will exhaust its surplus in the coming year and be compelled to cease operations unless legislation is rewritten. For certain banks this process may occur earlier if the FCS is unable to move sufficient funds to bolster their balance sheets. Thus, the FCS may have to ask for Federal assistance in 1987.

The System also faces the problem of a growing volume of acquired property. As foreclosure procedures initiated 1 or 2 years ago reach completion, FCS property holdings will grow significantly. Earnings on this property are often inadequate to cover the costs of holding it. In addition, marketing the property would enhance cash flow. However, if the FCS aggressively markets the property, it may drive property values down even further, leading to additional defaults and forcing the FCS to set aside further provisions for loan losses.

Differences in the financial condition of the various members of the FCS have created the need to transfer funds among the institutions. Several stronger banks and associations are objecting to the terms of these transfers. The objections have culminated in a number of court suits that have yet to be resolved. The fact that the FCS has been unable to resolve these differences internally suggests that if financial difficulties worsen, the System may be unable to reach a consensus on how to

allocate its resources. This could lead to reduced confidence within financial markets and affect Congressional willingness to assist the FCS.

Finally, the FCS must come to grips with the impact of current financial difficulties on its future structure. Even if further assistance proves unnecessary, the System still must determine how it will deal with a lower volume of farm loan demand, how it will pay for the deferred expenditures arising from the 1986 amendments, and how its lending policies will be adjusted to reflect lending on the basis of individual borrowers' risk and marginal cost pricing rather than uniform pricing based on the average cost of funds. Resolving these issues will determine the function and the form that the FCS assumes in future years.

Farmers Home Administration

The quality of the FmHA loan portfolio is not likely to improve significantly in the near future. FmHA has the highest rate of delinquencies of all institutional lenders. As of September 30, 1986, 22.8 percent of the farmer program portfolio was classified as delinquent. In addition, of the \$6.8 billion of delinquent debt, 77 percent is more than 3 years past due. Even if economic conditions in agriculture improve dramatically, much of this debt will have to be written off. ERS estimates that as of January 1, 1986, nearly one-third of the portfolio, \$8.2 billion, was at risk of default. Potentially, \$2.6 billion of this amount will be written off.

The rate of FmHA-initiated foreclosures remained extremely low in fiscal 1986, but this could change dramatically during the coming year. When the terms of a loan have been violated (e.g., by a delinquent payment), the lender has the right to send an acceleration letter that requests complete payment of the outstanding balance within a specified time period (often 30 days). Once acceleration has been initiated, the borrower must pay off the debt, go through foreclosure, or file for bankruptcy. During the first 8 months of 1986, the number of acceleration letters sent by FmHA averaged more than ten times greater than the same period in 1985. In fiscal 1986, 7,593 acceleration letters were sent, compared with 978 a year earlier.

The increase in acceleration letters should eventually lead to an increase in FmHA-initiated foreclosures, voluntary conveyances, and bankruptcies. Since FmHA is precluded from selling acquired properties if doing so will adversely affect the price of land in that market, the agency's inventory of acquired property will increase substantially during the next year.

Life Insurance Companies

The farm financial situation will remain a major problem for life insurance companies holding farm mortgages in 1987; loan delinquencies and defaults will continue to be much higher than recent historical experience. Companies will continue to forbear, extend, or otherwise adjust the terms of many problem loans, but in instances where reasonable projections do not allow for forbearance, they will proceed with foreclosure. Most farmers are making adjustments to current farm mortgage difficulties as best they can, by selling assets, cutting costs, and, where possible, reorganizing their operations to take full advantage of farm programs. Some farms that have adequate security are refinancing and others are offering the life insurance companies deeds in lieu of foreclosure. Many life insurance company farm loan departments will continue to spend a major portion of their time dealing with problem loans, or will contract with farm management companies for management expertise.

Insurance companies as a group will continue to view agricultural lending with considerable caution. Those companies making loans will do so on a very selective basis, generally to existing customers.

TAX REFORM

In October the President signed into law the Tax Reform Act of 1986, the most comprehensive overhaul of the Federal tax system in over 30 years. Most of the provisions of the new law take effect on January 1, 1987. The Act is revenue neutral: over the next 5 years, individuals will pay about \$120 billion less in taxes, while corporations pay \$120 billion more. Many of the provisions will affect agriculture.

Major Provisions

The Tax Reform Act provides for substantial reductions in tax rates for individuals and corporations. Tax revenue is maintained by eliminating many of the special provisions that have been added to the tax code over the years. A number of special farm tax provisions are among those being eliminated.

Individual Tax Provisions

The main feature of the Tax Reform Act is a radical change in the individual tax rate schedules (table 39). The new schedules have just two tax brackets and much lower rates. The top tax rate declines from 50 to 28 percent. Although the bottom rate rises from 11 to 15 percent, this is offset by increases in standard deductions and personal exemptions. For a family of four, the tax-free income level will rise to \$13,000 by 1989. Thus, both high- and low-income taxpayers will benefit from the new tax schedules. Under the new law, the tax brackets, personal exemptions, and standard deductions will continue to be indexed for inflation.

The favorable changes in the tax schedules are partly offset by the elimination of some special deductions. Under the new law, State and local sales taxes and consumer interest are no longer tax deductible. In addition, the spousal deduction and income averaging are repealed. There are also some new restrictions on eligibility for tax deductions for contributions to individual retirement accounts.

The Tax Reform Act also contains a new health insurance tax deduction for farmers and other self-employed workers. During 1987 through 1989, the self-employed will be able to deduct 25 percent of the cost of their health insurance. It is likely that proposals will be made to extend the deduction beyond 1989 and increase the deduction to 50 percent. The deduction partly offsets the inequity that results from the nontaxation of the health insurance premiums that many businesses pay for their employees.

Corporate Tax Rates

The Tax Reform Act reduces corporate tax rates as well as individual rates. Under

the new law, the number of tax brackets for corporations is reduced from five to three, and the top tax rate is reduced from 46 to 34 percent. The tax on the first \$100,000 of corporate income is reduced from 25.75 to 22.25 percent.

There are almost 60,000 corporate farms in the United States. Many of these are family farms that have been incorporated to take advantage of tax laws that favor corporations. The new tax law, with sharp cuts in individual tax rates, will reduce the incentive to incorporate.

Tax Treatment of Capital

The major change in the tax treatment of capital is the repeal of the investment tax credit (table 40). Under current law, most types of farm capital qualify for a 6- or 10-percent credit. The repeal of the credit is retroactive to January 1, 1986. However, the new law permits taxpayers to carry forward a large portion of unused credits from 1985 and earlier years. In addition, farmers are allowed to carry existing (unused) credits back as far as 15 years in recalculating tax liabilities. Each farmer's total refund under this carryback provision is limited to the lowest of: (1) 50 percent of existing unused credits, (2) the taxpayer's net tax liability for the past 15 years, or (3) \$750.

The Tax Reform Act also changes the write-off schedules for depreciable capital. Under the new law, tax lives for farm assets are longer (table 40), but the rate of depreciation for most farm assets rises from 150 to 200 percent declining balance.

Under current law, each taxpayer can immediately deduct up to \$5,000 of investment in depreciable capital each year. The limit was scheduled to increase to \$7,500 in 1988 and \$10,000 in 1990. The Tax Reform Act raises the limit to \$10,000 beginning in 1987.

Capital Gains

The Tax Reform Act eliminates the 60-percent exclusion for long-term capital gains. Farm real estate and dairy and breeding livestock are among the assets that now qualify for the exclusion. Under current law, the top tax rate on capital gains is 20

Table 39.--Tax reform bill: Major provisions affecting individual taxpayers

Tax provision	Current law	Tax reform bill
Tax rate schedule		
Single	15 brackets 11% bottom rate 50% over \$85,790	2 brackets 1/ 15% bottom rate 28% over \$17,850
Head of household	14 brackets 11% bottom rate 50% over \$114,390	2 brackets 1/ 15% bottom rate 28% over \$25,300
Joint return	14 brackets 11% bottom rate 50% over \$171,580	2 brackets 1/ 15% bottom rate 28% over \$29,750
Standard deduction		
Single	\$2,480	\$3,000 2/
Head of household	2,480	4,400 2/
Joint return	3,670	5,000 2/
Personal exemption	\$1,080	\$2,000 3/
Spousal deduction	10 percent of earned income of lower-earning spouse, or \$3,000, which ever less.	Repealed.
Itemized deductions (changes)		
State and local sales taxes	Deductible.	Nondeductible.
Consumer interest	Deductible.	Nondeductible.
Health insurance costs	Not deductible by the self-employed.	One-fourth of health insurance costs deductible.
Income averaging	Allowed if income is \$3,000 more than 140% of prior 3-year average income.	Repealed.

1/ These schedules will become effective in 1988. In 1987, there will be five tax brackets of 11, 15, 28, 35 and 38.5 percent. 2/ Effective in 1988. 3/ Effective in 1989. Exemption is \$1,900 in 1987 and \$1,950 in 1988.

percent (50 percent tax rate \times 40 percent taxable). After full phase-in of the new law, the top rate on capital gains will be 28 percent. The increase will be even greater for some farmers in lower tax brackets. At present, the bottom tax rate is 11 percent, and the corresponding tax rate on capital gains is 4.4 percent. Under the new law, the bottom tax rate on ordinary income and capital gains will be 15 percent.

Cash Accounting

Under current law, farmers are allowed to use the cash method of accounting for income

tax purposes. Under cash accounting, income is recognized in the year it is received, expenses are deducted in the year they are paid, and changes in the value of inventories are ignored. This greatly simplifies recordkeeping. However, it also allows investors to claim tax deductions (and earn tax savings) in the early years of an investment and postpone taxes on income by building inventories that are not taxed until they are sold.

Under the new tax law, farmers will retain the option of using cash accounting, but there will be a limit on tax deductions for

Table 40.—Tax treatment of farm capital under old and new law

Asset type	Investment tax credit		Tax life		Depreciation rate	
	Old law	New law	Old law	New law	Old law	New law
Motor vehicles 1/	6%	—	3 yr.	5 yr.	150%	200%
Farm machinery 2/	10%	—	5 yr.	7 yr.	150%	200%
Crop storage structures 3/	10%	—	5 yr.	7 yr.	150%	200%
Unitary livestock structures 4/	10%	—	5 yr.	7 yr.	150%	200%
Multipurpose structures 5/	—	—	19 yr.	20 yr.	175%	150%

1/ Autos and trucks. 2/ Tractors, combines, and all other farm machinery except motor vehicles. 3/ Silos, corn cribs, grain storage bins, and all other structures used principally for the bulk storage of crops. 4/ Milking parlors, poultry houses, unitary hog-raising facilities, and other structures used for the housing, raising, and feeding of a single type of livestock. 5/ Barns, machine sheds, garages, warehouses, dwellings for hired farm labor, structures used for the housing, raising, or feeding of more than one type of livestock, and all structures not classified elsewhere.

prepaid expenses. Each year, tax deductions for prepayments of feed, seed, fertilizer, and other supplies will be limited to 50 percent of the total value of the farm costs (wages, interest, depreciation) and farm inputs (feed, seed, etc.) that are actually used in or attributable to the given tax year.

Development Expenditures

Under current law, farmers are allowed to claim immediate tax deductions for expenditures associated with the development of certain capital assets. Examples of such expenditures include the costs of raising dairy and breeding livestock to maturity, and the cost of caring for new orchards and vineyards until they reach bearing age. (Citrus and almond groves are an exception; their development expenses must be capitalized.)

Under the Tax Reform Act, development expenditures must be capitalized if the animals or plants (except timber) have a development period of 2 years or longer. Capitalized expenditures are added to the cost or basis of the developed assets, and they can be claimed in future years as depreciation deductions, or they can be subtracted from asset price (at the time of sale) to compute taxable gain. In either case, the capitalization results in a postponement of the tax savings.

The requirement to capitalize development expenditures could impose a significant recordkeeping burden on many farmers. To reduce this burden, the new law gives each taxpayer the option of continuing to take immediate deductions for these expenses. However, those who elect this option must use straight-line depreciation for all farm assets that are placed in service while the election is in effect.

The Tax Reform Act also eliminates the immediate deductibility of expenditures for soil and water conservation and land clearing. Under the new law, these expenditures must be capitalized (added to the basis of the land) and recovered only when the land is sold. However, under the new law, farmers can continue to take immediate deductions for those expenditures that are consistent with a conservation plan approved by the USDA Soil Conservation Service or a comparable State agency.

Passive Losses

The Tax Reform Act puts new limits on the deductibility of passive losses. These are losses from activities or businesses in which the taxpayer is not an active participant. Under current law, these losses can be used to offset other income and shelter it from

taxation. Under the new law (with some exceptions), passive losses cannot be used to offset other income. However, the losses can be carried forward and used to offset future income from the same activity. Active farmers will be able to continue using farm losses to offset other income. In general, nonfarmers will need to carry forward their farm losses until their farm investments begin to show a profit.

Effects on Agriculture

In general, farmers will benefit from tax reform. Once the new law becomes fully effective, most farm sole proprietors will pay lower taxes. However, with the repeal of a number of special tax provisions, more farm income will be subject to taxation, and incentives and opportunities for tax shelter investments in agriculture will be reduced. Farm investments generally will be based more on economic returns and less on tax benefits. No adverse effects on farmland values are anticipated.

Tax Liabilities

The Tax Reform Act will reduce the income taxes paid by most farm sole proprietors, but most of the savings will be attributable to tax changes that are unrelated to the tax treatment of farm income. In general, farm income will be taxed more heavily under the new law. Thus, farmers as individuals will benefit from tax reform, but incentives for investment in farming likely will decline.

Farmers' tax liabilities in 1986 will increase slightly because of the retroactive repeal of the investment tax credit. Tax rates will be lower in 1987, but the new 15- and 28-percent tax brackets will not become effective until 1988. The increases in standard deductions are also delayed until 1988. In 1987, the total income taxes of farm sole proprietors could be about the same as under current law. In 1988 and thereafter, the total income tax should be less than what it would have been under current law at the same level of farm and off-farm income.

After full phase-in of tax reform, about 80 percent of all farmers will be in the bottom 15-percent tax bracket. The increases in

standard deductions and personal exemptions will reduce the taxable incomes of farmers by about \$10 billion per year, which is about 20 percent of the current tax base of farm sole proprietors. Two-thirds of all farmers now claim the standard deduction, and will thus be unaffected by the repeal of some itemized deductions. The repeal of the deduction for two-earner married couples will affect only one-fourth of all farmers. Many farmers will receive substantial tax savings from the new health insurance deduction.

Most farmers will be unaffected by the repeal of income averaging. In 1982 (the last year for which data are available), only 11 percent of all farmers used income averaging. The average tax saving was \$810. In 1984, new restrictions were placed on income averaging, thus the number of users and the average saving have likely declined. After full phase-in of tax reform, the two tax brackets and lower tax rates will greatly reduce the extra taxes that are paid by those with fluctuating versus stable incomes. In addition, with the continuation of cash accounting, farmers will retain some control over the timing of income, which will enable them to reduce fluctuations in taxable income.

Farm income will be taxed more heavily under the new tax law. Under current law, in the aggregate, the farm sector pays no net tax. In recent years, a majority of farm taxpayers have reported farm losses, and the total farm losses have exceeded the total farm profits of those who show profits. To a large extent, this is the result of the special farm tax provisions and other tax credits and benefits that allow farm income to escape taxation. It has been estimated that the tax savings generated by farm losses are greater than the taxes paid on farm income. Thus, the Treasury is actually losing tax revenue as a result of its attempts to tax farm income.^{1/} Under the new tax law, the annual loss of tax revenue should decline substantially.

^{1/}In 1982, about 2.7 million taxpayers reported farm income and expenses on IRS Schedule F. About 35 percent showed a farm profit, and the total profit for these farmers was about \$8 billion. The remaining 65 percent showed a farm loss; the total farm loss was \$18 billion. Thus, the net from

farming for all taxpayers was a negative \$10 billion. These taxpayers reported an additional \$13 billion in capital gains (before exclusion). It is likely that many of the gains were from nonfarm sources. The total off-farm income of the taxpayers with farm income or loss was \$65 billion, and total tax liability was \$11 billion. In the aggregate, nearly all of the tax liability was attributable to the off-farm income (and capital gains). It has been estimated that the Treasury would have received an additional \$3.8 billion in tax revenue in 1982 if farm profits had not been taxed and farm losses had not been used to offset other income. Statistics for other recent years would probably show similar results. See Edward I. Reinsel, "Federal Farm Income Taxes: Is Treasury the Loser?", presented at the American Agricultural Economics Association annual meeting, Reno, Nevada, July 27-30, 1986.

Investment Incentives

In general, tax reform will reduce incentives for investments in farm equipment and structures. On average, the user cost of depreciable farm capital may rise by about 10 percent. This could result in a slight decline in farm investment. However, the elimination of the investment tax credit will reduce the current tax bias toward equipment versus structures. Since the new tax law will be more neutral in the treatment of the various types of capital, it should result in an eventual improvement in the efficiency of the farm capital mix.

The increase in the expensing limit to \$10,000 will benefit small family farmers. About 90 percent of all farmers invest less than \$10,000 per year. Beginning next year, these farmers will be able to expense all of their investment, and will thus avoid the burden of maintaining tax depreciation records. In total, about one-third of all farm investment will be expensed under the new law. However, the tax savings from expensing will not be as great as the current savings from the investment tax credit and depreciation. On average, the user cost of the expensed assets will be about 6 percent higher than the cost under current law with tax credit and depreciation.

The repeal of the capital gains exclusion likely will have its greatest impact on livestock farmers. In 1982, 64 percent of all dairy farmers reported some long-term capital gains, versus 32 percent for other farmers. This is the result of the high frequency of sales of raised dairy cattle by these farmers. Beef cattle farmers and hog, sheep, and goat farmers were also above average in the reporting of capital gains, which reflects the fact that sales of breeding livestock often qualify for capital gains treatment. Since capital gains will be taxed at a higher rate under the new law, livestock operations will have less incentive to expand or maintain their dairy and breeding herds.

The new limits on the deductibility of development expenditures for orchards, vineyards, and dairy and breeding cattle should have a substantial impact on investments in these areas. Under current law, investors benefit from immediate deductibility of development costs and from the favorable capital gains tax treatment of the profits at the time of sale. Together, these tax provisions can turn before-tax losses into after-tax profits. They attract tax shelter investment funds into these areas of agriculture, and lead to overproduction that distorts the mix of farm output.

The following is an example of the effects of current tax provisions. Assume that it costs \$500 to raise a dairy cow. The cow sells for \$400, thus there is a \$100 loss before taxes. If the farmer is in the 50-percent bracket, he receives \$250 in tax savings by deducting the costs of raising the cow. When the cow is sold, he pays a capital gains tax of \$80 (\$400 gain x 40-percent taxable x 50-percent tax rate). Thus the after-tax cost of raising the cow is \$250, the after-tax sales proceeds are \$320, and the after-tax profit is \$70.

With the elimination of the current deductibility of development costs, there will no longer be a strong tax incentive to invest in orchards, vineyards, and dairy and breeding livestock. Tax shelter investments in these areas should decline resulting in a more efficient mix of farm output.

The new limit on the deductibility of passive losses should also lead to a decline in

tax shelter investments in agriculture. Taxpayers will not be allowed to use farm losses to offset other income unless they are active participants in the farms that produce the losses. Most tax shelter investors will not qualify as active participants. Thus, under the new law, it will be much more difficult to use farm losses to shelter nonfarm income from taxation.

Farmland Values

Tax reform should not have a major effect on farmland values. The primary determinants of land values are expected farm income and interest rates. Thus, changes in farm commodity and credit policies and general economic conditions are likely to have greater impacts than changes in taxation.

The primary tax changes that will affect land investments are the decline in tax rates and the elimination of the capital gains exclusion. Because of these changes, landowners will keep a greater portion of the current income that they receive from farming or renting out their land, but they will pay higher capital gains taxes when they sell their land. The net impact on the total after-tax returns from a land investment will depend upon the income and tax bracket of the investor, the length of time from purchase to sale, and other factors.

In general, it appears that tax reform will raise the profitability of land investments for

many high-income investors. The decline in the top tax rate from 50 to 28 percent will more than offset the increase from 20 to 28 percent in the tax rate on capital gains. As a result, high-income investors may be willing to bid more for land. (However, during periods of rising land values, these tax changes will reduce the attractiveness of land as a tax shelter.) For those farmers with average incomes, the tax changes will tend to offset each other, and there should be little or no effect on the after-tax profitability of land investments.

Nonfarmers who borrow to buy farmland could be affected by the new limit on the deductibility of losses from passive investments. The limit will apply to investors having negative cash flows (i.e., land income less than interest on debt), and will require that the losses be carried forward to offset future income. The delay in claiming the losses will reduce the after-tax return on land. However, in the current farmland market, with little prospect for short-term appreciation in values, it is likely that there are few nonfarmers who are willing to accept the risks of large debt and negative cash flow from farmland investments. In addition, the new law contains an exclusion that allows most investors to take current deductions for up to \$25,000 of losses from rental real estate, including farmland. Thus, the impacts of the passive loss provision on the farmland market will likely be small.

Appendix table 1.—Real estate farm debt excluding households, December 31

Year	Debt owed to reporting institutions					Individuals and others	Total
	Federal	Life	All	Farmers	Total		
	Land Banks	insurance	operating	Home			
		companies	banks	Administration			
Million dollars							
1973	9,849	5,480	4,844	2,712	22,885	12,914	35,800
1974	12,187	5,799	5,312	2,899	26,197	14,363	40,561
1975	14,533	6,198	5,621	3,044	29,396	15,764	45,161
1976	16,881	6,828	6,075	3,311	33,095	17,258	50,352
1977	19,640	8,150	6,994	3,613	38,397	19,556	57,953
1978	22,686	9,698	7,717	3,747	43,848	21,712	65,560
1979	27,322	11,278	7,798	6,467	52,865	25,660	78,526
1980	33,208	11,991	7,760	7,021	59,980	27,801	87,781
1981	40,254	12,136	7,573	7,965	67,928	29,291	97,218
1982	43,859	11,898	7,626	8,282	71,665	29,527	101,192
1983	44,923	11,834	8,494	8,626	73,877	29,847	103,726
1984	45,236	11,592	9,313	9,148	75,289	27,634	102,926
1985	41,124	11,036	10,443	9,537	72,140	25,160	97,300
1986P	36,156	10,360	11,345	10,285	68,146	23,881	92,027
Percent change in year							
1973	20.6	5.9	14.1	6.5	13.7	11.3	12.8
1974	23.7	5.8	9.7	6.9	14.5	11.2	13.3
1975	19.3	6.9	5.8	5.0	12.2	9.8	11.3
1976	16.2	10.2	8.1	8.7	12.6	9.5	11.5
1977	16.3	19.4	15.1	9.1	16.0	13.3	15.1
1978	15.5	19.0	10.3	3.7	14.2	11.0	13.1
1979	20.4	16.3	1.0	72.6	20.6	18.2	19.8
1980	21.5	6.3	.0	8.6	13.8	8.3	11.8
1981	31.2	1.2	-2.4	11.8	13.3	5.4	10.8
1982	9.0	-2.0	.1	4.0	5.5	.8	4.1
1983	2.4	-.5	11.4	4.2	3.1	1.1	2.5
1984	.7	-2.1	9.6	6.1	1.9	-7.4	-.8
1985	-9.1	-4.8	12.1	4.3	-4.2	-9.0	-5.5
1986P	-12.1	-6.1	8.6	7.8	-5.5	-5.1	-5.4
Percentage distribution of debt							
1973	27.5	15.3	13.5	7.6	63.9	36.1	100.0
1974	30.1	14.3	13.1	7.2	64.6	35.3	100.0
1975	32.2	13.7	12.5	6.7	65.1	34.9	100.0
1976	33.4	13.6	12.1	6.6	65.7	34.3	100.0
1977	33.9	14.1	12.1	6.2	66.3	33.7	100.0
1978	34.6	14.8	11.8	5.7	66.9	33.1	100.0
1979	34.8	14.4	10.0	8.2	67.2	32.7	100.0
1980	37.8	13.6	8.9	8.0	68.3	31.7	100.0
1981	41.4	12.5	7.8	8.2	69.9	30.1	100.0
1982	43.3	11.8	7.5	8.1	70.8	29.2	100.0
1983	43.3	11.4	8.2	8.3	71.2	28.8	100.0
1984	44.0	11.3	9.0	8.9	73.1	26.9	100.0
1985	42.3	11.3	10.7	9.8	74.1	25.9	100.0
1986P	39.3	11.3	12.3	11.2	74.1	25.9	100.0

P = preliminary.

Appendix table 2.--Nonreal estate farm debt excluding households, December 31

Year	Debt owed to reporting institutions (excluding CCC)					Individuals and others		Total CCC loans	CCC price support and storage loans	Total CCC including loans
	All operating banks	Production Credit Assoc.	Federal Intermediate Credit Banks	Farmers Home Administration	Total	:	:			
Million dollars										
1973	16,223	7,516	331	772	24,842	6,728	31,570	750		32,320
1974	17,235	9,150	374	919	27,678	7,398	35,076	319		35,394
1975	19,051	10,339	350	1,560	31,300	8,382	39,682	375		40,057
1976	22,002	11,759	368	1,652	35,781	9,789	45,570	1,040		46,610
1977	24,295	12,978	374	2,764	40,411	11,999	52,410	4,540		56,950
1978	26,718	14,369	509	5,087	46,683	14,011	60,694	5,666		66,360
1979	29,327	17,388	665	7,905	55,285	16,278	71,563	5,070		76,633
1980	29,986	18,939	810	10,346	60,081	17,367	77,448	4,978		82,426
1981	31,215	20,355	913	12,718	65,201	18,404	83,605	8,011		91,616
1982	34,322	19,653	871	12,988	67,816	19,139	86,955	15,433		102,388
1983	37,075	18,543	850	12,888	69,356	18,566	87,922	10,801		98,723
1984	37,619	17,208	875	13,773	69,475	17,640	87,115	8,635		95,750
1985	33,738	13,448	537	15,078	62,801	15,070	77,871	16,928		94,799
1986P	30,364	11,429	376	16,133	58,302	13,766	72,069	22,128		94,196
Percent change in year										
1973	19.9	18.5	22.4	12.5	19.4	14.2	18.2	-58.2		13.4
1974	6.2	21.7	13.0	19.0	11.4	10.0	11.1	-57.5		9.5
1975	10.5	23.9	-6.4	69.7	13.1	13.3	13.1	14.9		13.2
1976	15.5	3.7	5.1	5.9	14.3	16.8	14.8	177.3		16.4
1977	10.4	10.4	1.6	67.3	12.9	22.6	15.0	336.5		21.3
1978	10.0	10.7	36.1	84.0	15.5	16.8	15.8	24.8		16.5
1979	9.8	21.0	30.6	55.4	18.4	16.2	17.9	-10.5		15.5
1980	2.2	8.9	21.8	8.7	8.7	6.7	8.2	-1.8		7.6
1981	4.1	7.5	12.7	3.9	8.5	6.0	7.9	60.9		11.1
1982	10.0	-3.4	-4.6	2.3	4.0	4.0	4.0	92.6		11.8
1983	8.0	-5.6	-2.4	.3	2.3	-3.0	1.1	-30.0		-3.6
1984	1.5	-7.2	2.9	6.9	.2	-5.0	-9.9	-20.1		-3.0
1985	-10.3	-21.8	-38.6	9.5	-9.6	-14.6	-10.6	96.0		-1.0
1986P	-10.0	-15.0	-30.0	7.0	-7.2	-8.7	-7.5	30.7		-.6
Percentage distribution of debt										
1973	50.2	23.2	1.0	2.5	76.9	20.8	97.7	2.3		100.0
1974	48.7	25.9	1.1	2.6	78.3	20.8	99.1	.9		100.0
1975	47.6	25.8	.9	3.9	78.2	20.9	99.1	.9		100.0
1976	47.2	25.2	.8	3.5	76.7	21.0	97.7	2.3		100.0
1977	42.7	22.8	.7	4.8	71.0	21.0	92.0	8.0		100.0
1978	40.3	21.7	.8	7.7	70.3	21.1	91.5	8.5		100.0
1979	38.3	22.7	.9	10.3	72.1	21.2	93.4	6.6		100.0
1980	36.4	23.0	1.0	12.6	72.9	21.1	94.0	6.0		100.0
1981	34.1	22.2	1.0	13.9	71.2	20.1	91.3	8.7		100.0
1982	33.5	19.2	.9	12.7	66.2	18.7	84.9	15.1		100.0
1983	37.6	18.8	.9	13.1	70.3	18.8	89.1	10.9		100.0
1984	39.3	18.0	.9	14.4	72.6	18.4	91.0	9.0		100.0
1985	35.6	14.2	.6	15.9	66.2	15.9	82.1	17.9		100.0
1986P	32.2	12.1	.4	17.1	61.9	14.6	76.5	23.5		100.0

P = preliminary.

Appendix table 3.--Selected interest rates, 1960-86 1/

Year	Prime rate charged by banks 2/	3-month Treasury bills 3/	Real estate		FmHA 6/	Avg. on farm real estate 7/	Commercial banks, nonreal estate loans 8/		Production Credit Associations	Nonreal estate		Avg. on total farm debt 7/
			Federal Reserve Banks 4/	Life insurance companies 5/			FmHA 4/	FmHA 9/		Avg. on nonreal estate debt 7/		
Percent												
1960	4.82	2.93	6.00	5.00	5.00	5.04	NA	NA	7.25	5.00	5.52	5.29
1965	4.54	3.95	5.60	5.50	5.00	5.36	NA	NA	6.58	5.00	5.50	5.43
1970	8.00	6.46	8.68	9.31	5.00	5.92	8.32	8.32	9.11	8.63	6.74	6.29
1975	8.25	5.84	8.69	10.03	5.00	7.03	9.03	9.03	9.11	8.63	7.77	7.36
1980:	15.27	11.61	10.39	13.21	11.05	8.32	15.2	15.2	12.74	11.00	10.44	9.33
I	16.40	13.46	9.87	12.47	10.29	NA	14.1	14.1	12.07	10.64	NA	NA
II	16.32	10.05	10.78	14.24	11.73	NA	17.4	17.4	13.65	12.01	NA	NA
III	11.61	9.24	10.52	12.58	11.00	NA	13.5	13.5	13.25	10.50	NA	NA
IV	16.73	13.71	10.37	13.56	11.16	NA	15.5	15.5	11.99	10.83	NA	NA
1981:	18.87	14.08	11.27	15.42	13.00	9.07	18.5	18.5	14.46	14.04	11.73	10.33
I	19.21	14.37	10.76	14.06	12.25	NA	17.9	17.9	12.90	13.00	NA	NA
II	18.93	14.83	10.99	14.91	13.23	NA	17.9	17.9	14.19	14.15	NA	NA
III	20.32	15.09	11.51	16.23	13.25	NA	19.6	19.6	15.04	14.50	NA	NA
IV	17.01	12.02	11.83	16.48	13.25	NA	18.8	18.8	15.71	14.50	NA	NA
1982:	14.86	10.73	12.27	15.51	12.94	9.71	16.7	16.7	14.58	13.73	11.15	10.41
I	16.27	12.90	12.17	16.36	13.25	NA	17.7	17.7	15.26	14.33	NA	NA
II	16.50	12.36	12.28	16.21	13.25	NA	17.8	17.8	14.84	14.25	NA	NA
III	14.72	9.71	12.35	15.99	13.25	NA	16.8	16.8	14.42	14.25	NA	NA
IV	11.96	7.94	12.29	13.46	12.01	NA	14.8	14.8	13.80	12.09	NA	NA
1983:	10.79	8.62	11.63	12.47	10.79	9.71	13.5	13.5	11.95	10.31	10.07	9.89
I	10.88	8.08	11.90	12.93	10.89	NA	13.8	13.8	12.83	10.47	NA	NA
II	10.50	8.42	11.70	12.30	10.75	NA	13.2	13.2	11.77	10.25	NA	NA
III	10.80	9.19	11.49	12.08	10.75	NA	13.6	13.6	11.37	10.25	NA	NA
IV	11.00	8.79	11.44	12.55	10.75	NA	13.6	13.6	11.82	10.25	NA	NA
1984:	12.04	9.57	11.76	13.49	10.75	9.57	14.1	14.1	12.47	10.25	10.17	9.86
I	11.07	9.13	11.50	13.04	10.75	NA	13.5	13.5	12.05	10.25	NA	NA
II	12.31	9.84	11.62	13.56	10.75	NA	14.2	14.2	12.10	10.25	NA	NA
III	12.99	10.34	11.79	13.71	10.75	NA	14.8	14.8	12.61	10.25	NA	NA
IV	11.80	8.97	12.14	13.65	10.75	NA	14.2	14.2	13.10	10.25	NA	NA
1985:	9.94	7.49	12.24	NA	10.75	9.35	12.8	12.8	12.40	10.25	10.29	9.77
I	10.54	8.18	12.14	12.88	10.75	NA	13.2	13.2	12.91	10.25	NA	NA
II	10.20	7.52	12.40	12.73	10.75	NA	13.0	13.0	12.50	10.25	NA	NA
III	9.50	7.10	12.40	12.50	10.75	NA	12.3	12.3	12.16	10.25	NA	NA
IV	9.50	7.15	NA	12.34	10.75	NA	12.3	12.3	12.03	10.25	NA	NA
1986:	NA	NA	NA	NA	9.13	NA	NA	NA	NA	8.66	NA	NA
I	9.37	6.89	12.30	12.78	10.75	NA	12.0	12.0	12.3	10.25	NA	NA
II	8.61	6.13	12.25	12.04	9.25	NA	11.5	11.5	11.4	8.71	NA	NA
III	7.85	5.53	NA	NA	8.25	NA	11.4	11.4	NA	8.00	NA	NA
IV	NA	NA	NA	NA	8.25	NA	NA	NA	NA	7.67	NA	NA

NA = Not available. 1/ For historic data see Agricultural Finance Statistics, USDA, ERS, 1960-83. 2/ Source: Federal Reserve Bulletin, various issues, Board of Governors of the Federal Reserve System. 3/ Source: Economic Report of the President, Council of Economic Advisors. 4/ Source: Farm Credit Administration. 5/ Estimated by ERS from data obtained in a quarterly life insurance company survey. 6/ FmHA ownership loan rates are weighted by length of time each of various quarters. Rates do not reflect limited resource loans. 7/ Computed from data in Economic Indicators of the Farm Sector, National Financial Summary, USDA, ERS, 1985. Excludes farm operator household interest and debt. 8/ Source: Agricultural Finance Databook--Quarterly Series, Board of Governors of the Federal Reserve System and James Johnson, Emanuel Melichar, C. Edward Harshbarger, "Financial Conditions of the Farm Sector and Financial Institutions," Paper presented at the Symposium: Financial Stress in Agriculture: Issues and Implications, Kansas City, Mo.; Nov. 24, 1986. 9/ FmHA operating loans, rates weight length of time each of various rates are in effect during quarter.

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